

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Carrie S. Thompson Examiner #: 79244 Date: 11/15/04
 Art Unit: 174 Phone Number 301 571 272-153 Serial Number: 10/718,083
 Mail Box and Bldg/Room Location: REMA Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Organic Electroluminescence Devices using Double spin organic crystals

Inventors (please provide full names): Kwang Kim; Sehwan Son; Seokke Yoon; Jae Bae;
Youn-Jae Lee; Sung-jin; jieun Kim; Jae Lee

Earliest Priority Filing Date: 3/14/2002 4/2/01 3/17

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Please do a search on claims 1-16.

Chemical compound I

Chemical compound 109 - Claim ?

Chemical compound 200 - Claim 13

Chemical compound 301 - Claim 15

thanks

STAFF USE ONLY

Searcher: EZ

Type of Search	Vendors and cost where applicable
NA Sequence (#)	STN <u>\$185.80</u>
AA Sequence (#)	Dialog _____
Structure (#)	Questel/Orbit _____
Bibliographic	Dr. Link _____
Litigation	Lexis/Nexis _____
Fulltext	Sequence Systems _____
Patent Family	WWW/Internet _____
Other	Other (specify) _____

Searcher Phone #: _____

Searcher Location: _____

Date Searcher Picked Up: _____

Date Completed: 11-23-04

Searcher Prep & Review Time: 5

Clerical Prep Time: _____

Online Time: 60

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COPYRIGHT (C) 2004 American Chemical Society (ACS)

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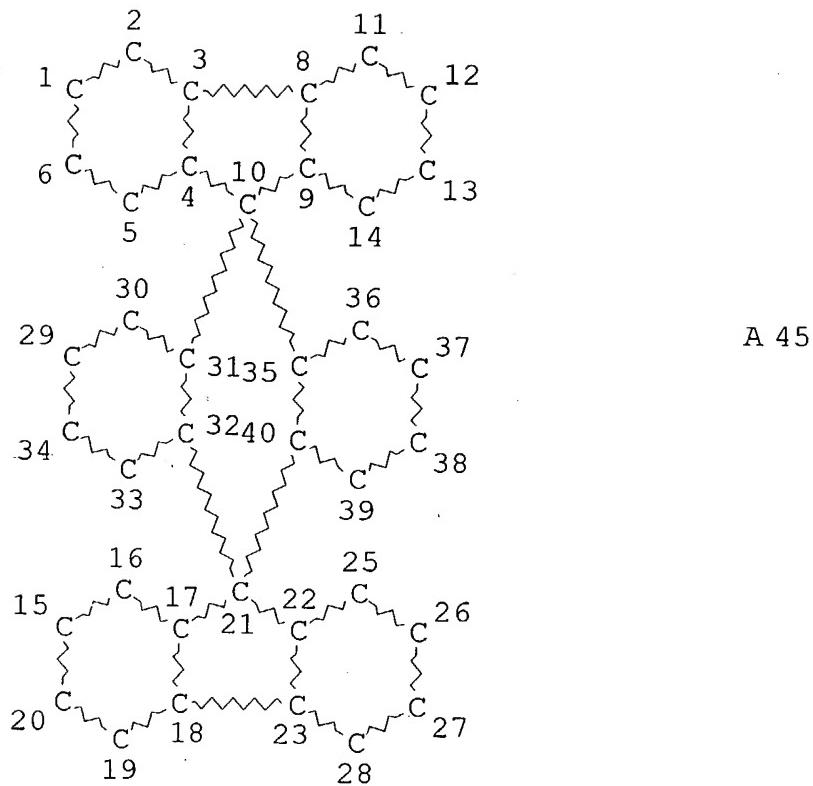
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L11 FILE 'CAOLD' ENTERED AT 13:48:33 ON 23 NOV 2004
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L12 FILE 'ZCAPLUS' ENTERED AT 13:49:23 ON 23 NOV 2004
4 S L10

FILE 'REGISTRY' ENTERED AT 13:49:47 ON 23 NOV 2004

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L8 STR



NODE ATTRIBUTES:

NSPEC IS RC AT 45
 CONNECT IS M1 RC AT 45
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 39

STEREO ATTRIBUTES: NONE

L10 104 SEA FILE=REGISTRY SSS FUL L8

100.0% PROCESSED 15865 ITERATIONS
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104 ANSWERS

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L12 ANSWER 1 OF 4 ZCAPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 2003:913158 ZCAPLUS
 DOCUMENT NUMBER: 139:388293
 TITLE: New organic compounds for electroluminescence
 and organic electroluminescent devices using the same
 INVENTOR(S): Kim, Ji-Eun; Son, Se-Hwan; Bae, Jae-Soon; Lee,
 Youn-Gu; Kim, Kong-Kyeum; Lee, Jae-Chol; Jang,
 Jun-Gi; Im, Sung-Gap
 PATENT ASSIGNEE(S): LG Chem, Ltd., S. Korea
 SOURCE: PCT Int. Appl., 145 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003095445	A1	20031120	WO 2003-KR899	200305 06
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
KR 2003087522	A	20031114	KR 2003-10439	200302 19
US 2004067387	A1	20040408	US 2003-431349	200305 06
PRIORITY APPLN. INFO.:			KR 2002-25084	A 200205

07

KR 2003-10439

A

200302
19

OTHER SOURCE(S): MARPAT 139:388293

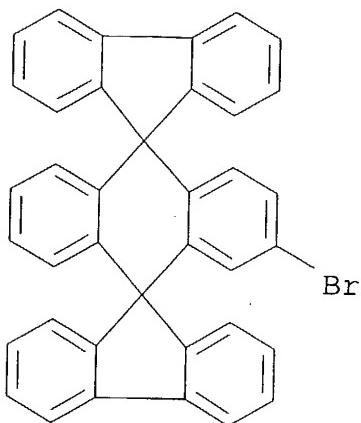
AB Disclosed is a novel group of compds. having a general structure of anthracene body substituted with at least one thiophenyl group, which can be further substituted with various substituent groups. These new compds. are generally compatible with org. electroluminescence. Also disclosed are org. electroluminescent devices and method of making the same. The org. electroluminescent devices include at least one of the compds. in various layers thereof. Org. electroluminescent devices employing the new compds. in their light-emitting layers show outstanding stability.

IT 474687-62-2P 474687-82-6P

(prepn. of new org. compds. for electroluminescence and org. electroluminescent devices)

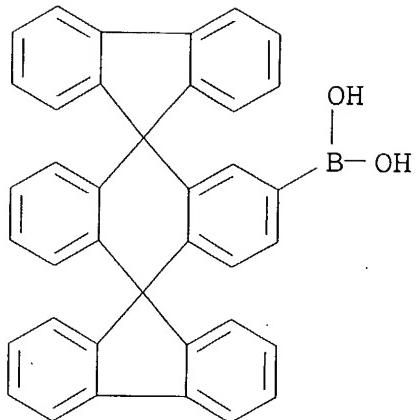
RN 474687-62-2 ZCPLUS

CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9'''-[9H]fluorene], 2'-bromo- (9CI) (CA INDEX NAME)



RN 474687-82-6 ZCPLUS

CN Boronic acid, dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9'''-[9H]fluoren]-2'-yl- (9CI) (CA INDEX NAME)

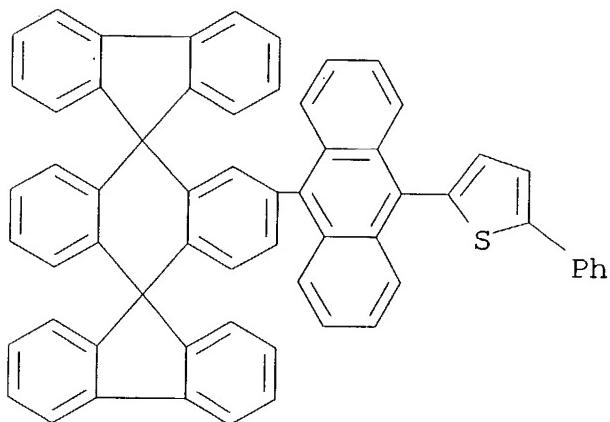


IT 474688-22-7P 624743-85-7P

(prep. of new org. compds. for electroluminescence and org. electroluminescent devices)

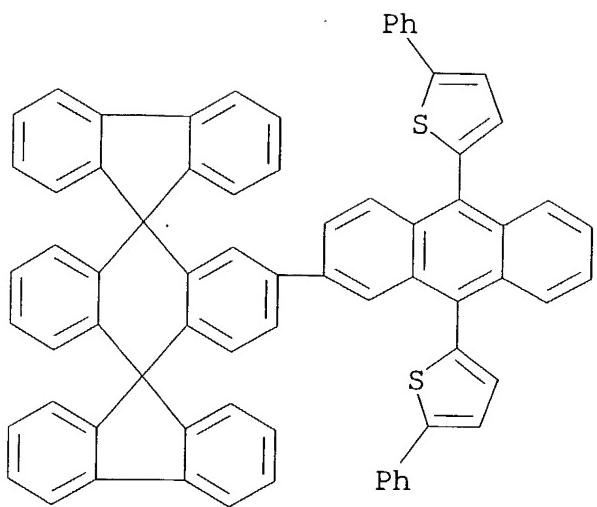
RN 474688-22-7 ZCPLUS

CN Thiophene, 2-(10-dispiro[9H-fluorene-9,9'-(10'H)-anthracene-10',9'''- [9H]fluoren]-2'-yl-9-anthracyenyl)-5-phenyl- (9CI) (CA INDEX NAME)



RN 624743-85-7 ZCPLUS

CN Thiophene, 2,2'-(2-dispiro[9H-fluorene-9,9'-(10'H)-anthracene-10',9'''- [9H]fluoren]-2'-yl-9,10-anthracenediyl)bis[5-phenyl- (9CI) (CA INDEX NAME)

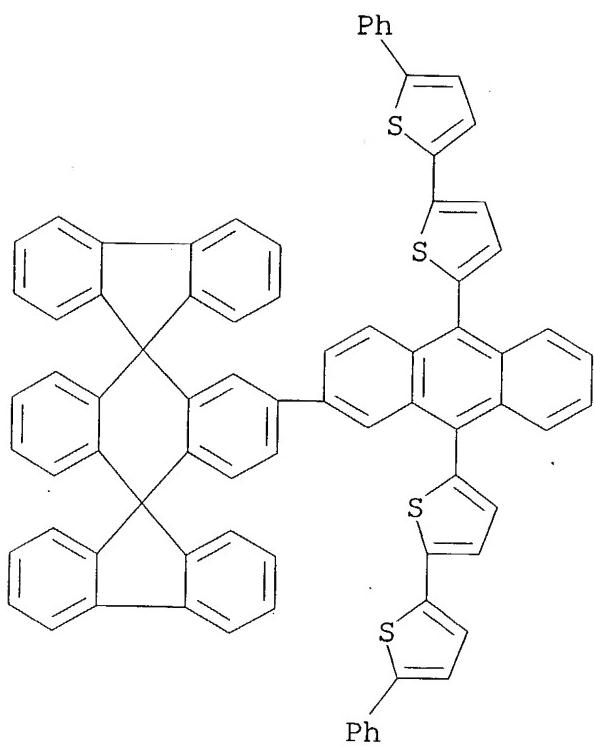


IT 474688-16-9 474688-21-6

(prepn. of new org. compds. for electroluminescence and org.
electroluminescent devices)

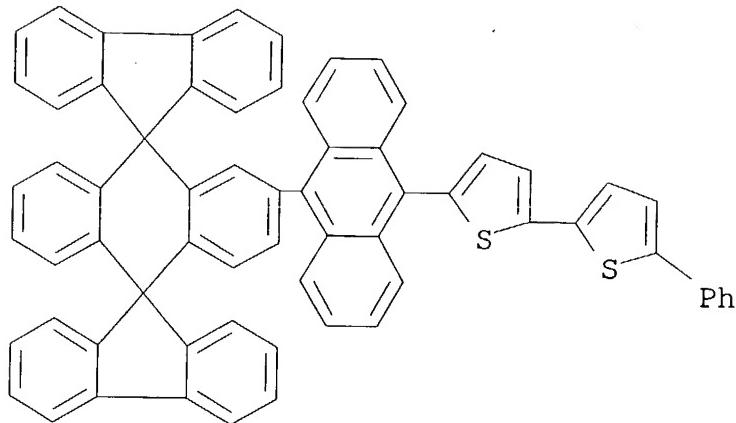
RN 474688-16-9 ZCAPLUS

CN 2,2'-Bithiophene, 5,5''-(2-dispiro[9H-fluorene-9,9'(10'H)-anthracene-
10',9''-[9H]fluoren]-2'-yl-9,10-anthracenediyl)bis[5'-phenyl- (9CI)
(CA INDEX NAME)



RN 474688-21-6 ZCPLUS

CN 2,2'-Bithiophene, 5-(10-dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluoren]-2'-yl-9-anthracyl)-5'-phenyl- (9CI) (CA INDEX NAME)



IT 474687-62-2P 474687-82-6P

(prepn. of new org. compds. for electroluminescence and org.

- electroluminescent devices)
 IT **474688-22-7P 624743-85-7P**
 (prepn. of new org. compds. for electroluminescence and org.
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 IT **474688-16-9 474688-21-6**
 (prepn. of new org. compds. for electroluminescence and org.
 electroluminescent devices)

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR
 THIS RECORD. ALL CITATIONS AVAILABLE IN
 THE RE FORMAT

L12 ANSWER 2 OF 4 ZCPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 2003:571287 ZCPLUS
 DOCUMENT NUMBER: 139:108823
 TITLE: New material for transporting electrons and
 organic electroluminescent display using the
 same
 INVENTOR(S): Yoon, Seok-Hee; Bae, Jae-Soo; Lee, Youn-Gu; Im,
 Sung-Gap; Lee, Jae-Chol; Kim, Ji-Eun; Kim,
 Kong-Kyeom; Son, Se-Hwan; Han, Young-Kyu
 PATENT ASSIGNEE(S): LG Chem, Ltd., S. Korea
 SOURCE: PCT Int. Appl., 88 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003060956	A2	20030724	WO 2003-KR112	200301 17
WO 2003060956	A3	20031113		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
KR 2003067773	A	20030819	KR 2002-3025	200201

US 2003165715	A1	20030904	US 2003-345310	18
				200301
EP 1465874	A2	20041013	EP 2003-729561	16
				200301
				17

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,
 PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU,
 SK

PRIORITY APPLN. INFO.: KR 2002-3025 A

200201
 18

WO 2003-KR112 W

200301
 17

OTHER SOURCE(S): MARPAT 139:108823

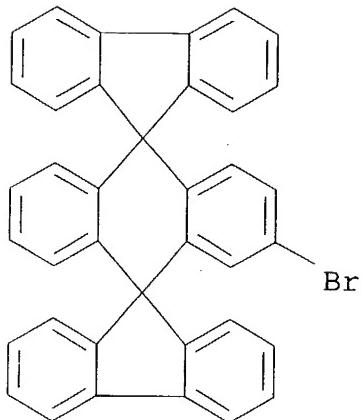
AB Novel materials for electron injection/transportation and emitting layers can greatly improve the stability of an org. electroluminescent display. Electroluminescent displays incorporating these materials produce blue light at low voltage levels. These novel org. materials include compds. in which 1-2 imidazole functional groups are introduced in the 2 or 2,6-site of 9,10 substituted anthracene. An org. electroluminescent display with an org. compd. layer of these materials has high efficiency, thermal stability, operationally stability and maintains driving voltage before and after operation.

IT 474687-62-2P 474687-82-6P 474687-99-5P
 474688-06-7P 474688-07-8P

(prepn. of electron transporting material for org. electroluminescent display)

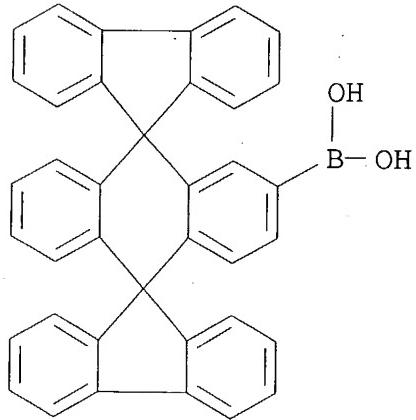
RN 474687-62-2 ZCAPLUS

CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluorene],
 2'-bromo- (9CI) (CA INDEX NAME)



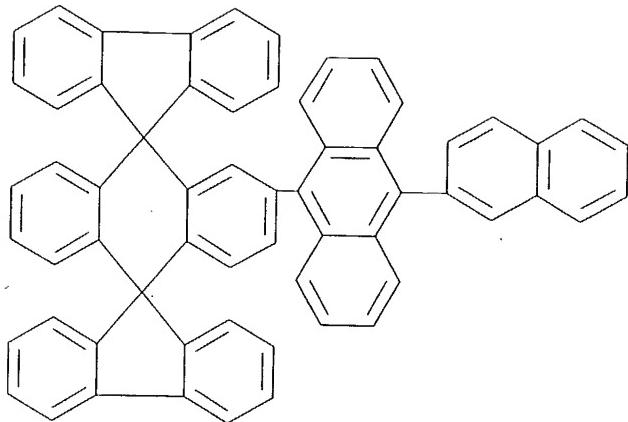
RN 474687-82-6 ZCPLUS

CN Boronic acid, dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluoren]-2'-yl- (9CI) (CA INDEX NAME)



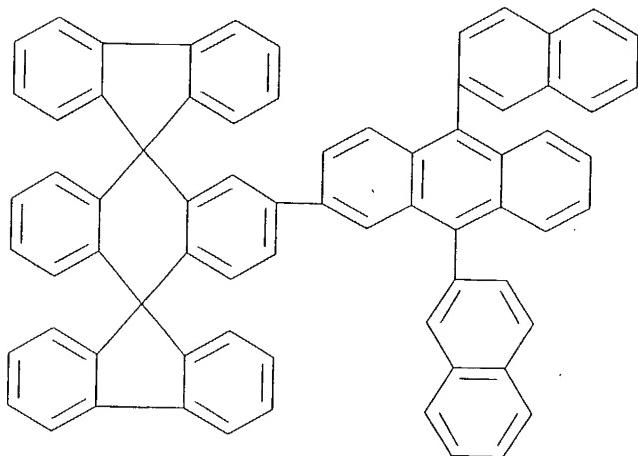
RN 474687-99-5 ZCPLUS

CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluoren]-2'-(10-(2-naphthalenyl)-9-anthracyl)- (9CI) (CA INDEX NAME)



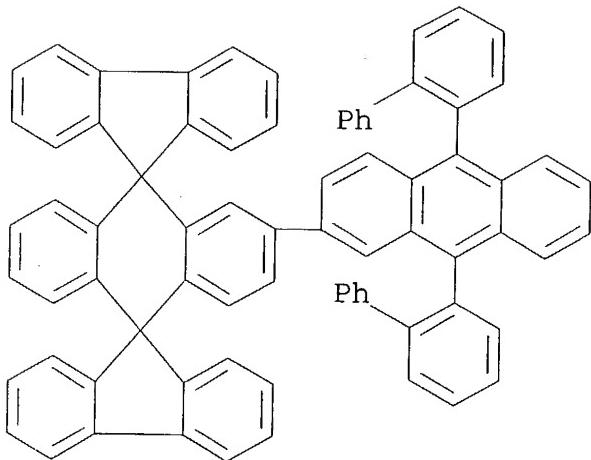
RN 474688-06-7 ZCPLUS

CN Dispiro[9H-fluorene-9,9'-(10'H)-anthracene-10',9'''-[9H]fluorene],
2'-(9,10-di-2-naphthalenyl-2-anthracyl)- (9CI) (CA INDEX NAME)



RN 474688-07-8 ZCPLUS

CN Dispiro[9H-fluorene-9,9'-(10'H)-anthracene-10',9'''-[9H]fluorene],
2'-[9,10-bis([1,1'-biphenyl]-2-yl)-2-anthracyl]- (9CI) (CA INDEX
NAME)



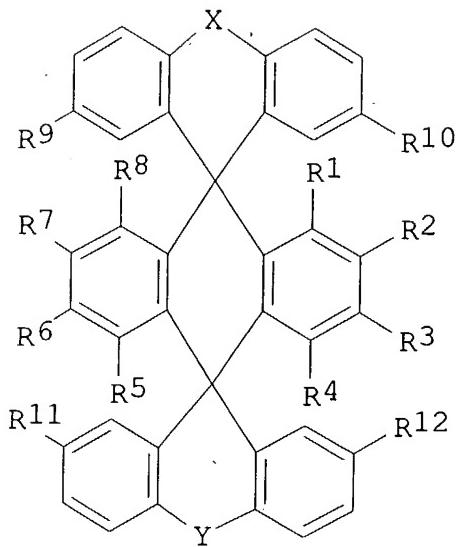
IT 474687-62-2P 474687-82-6P 474687-99-5P
 474688-06-7P 474688-07-8P
 (prepn. of electron transporting material for org.
 electroluminescent display)

L12 ANSWER 3 OF 4 ZCPLUS COPYRIGHT 2004 ACS on STN
 ACCESSION NUMBER: 2003:74514 ZCPLUS
 DOCUMENT NUMBER: 138:97990
 TITLE: Bispirocyclic ring derivatives and organic
 electroluminescent devices using them
 INVENTOR(S): Li, Bin; Qiu, Yong; Wang, Fei
 PATENT ASSIGNEE(S): Qinghua Univ., Peop. Rep. China
 SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 77
 pp.
 DOCUMENT TYPE: CODEN: CNXXEV
 Patent
 LANGUAGE: Chinese
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

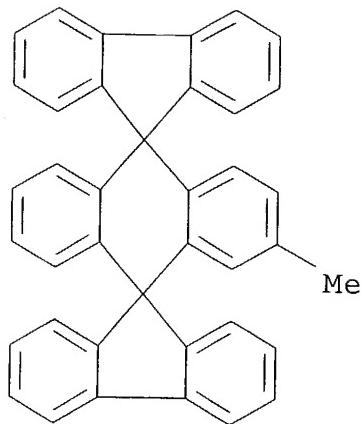
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1338499	A	20020306	CN 2001-130676	200108 20
PRIORITY APPLN. INFO.:			CN 2001-130676	200108 20

OTHER SOURCE(S): MARPAT 138:97990

GI

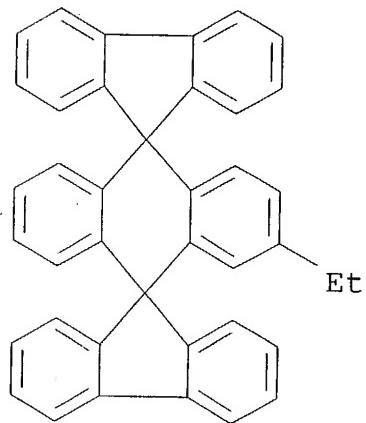


- AB The invention relates to an org. electroluminescent device comprising a pair of electrodes sandwiching .gtoreq.1 layer(s) contg. .gtoreq.1 bispirocyclo ring derivs. I [R1-12 = H, or C1-24 or other atoms-contg. moiety; such as (iso)alkyl, OH, alkoxy, NO, CN, amino, S, halo, arom., (un)substituted heterocycl; X, Y = bond, O, S, NR, R-C-R (R = H or C1-24 or other atoms-contg. moiety)]. The Markush structures were claimed. The electroluminescent device was manufd. by vacuum vapor deposition of the synthetic electroluminescent material on In2O3-SnO₂ film (as anode)-deposited glass sheet and then vacuum vapor deposition of Mg/Ag (10:1) layer (as cathode) on.
- IT 484687-26-5 484687-27-6 484687-28-7
484687-29-8 484687-30-1 484687-31-2
484687-32-3 484687-33-4 484687-34-5
484687-35-6 484687-36-7
(novel bispirocyclo deriv. for org. electroluminescent devices)
- RN 484687-26-5 ZCAPLUS
- CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluorene], 2'-methyl- (9CI) (CA INDEX NAME)



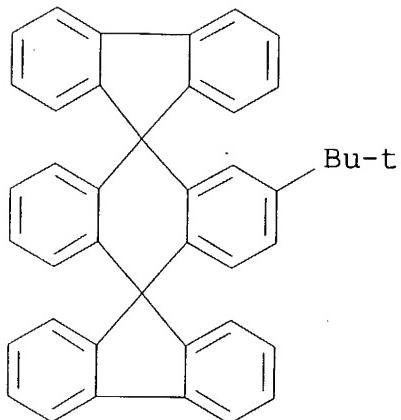
RN 484687-27-6 ZCPLUS

CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9'''-[9H]fluorene],
2'-ethyl- (9CI) (CA INDEX NAME)



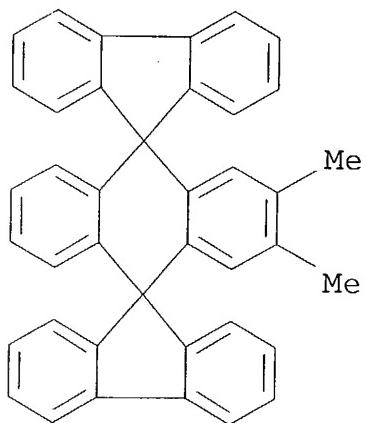
RN 484687-28-7 ZCPLUS

CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9'''-[9H]fluorene],
2'-(1,1-dimethylethyl)- (9CI) (CA INDEX NAME)



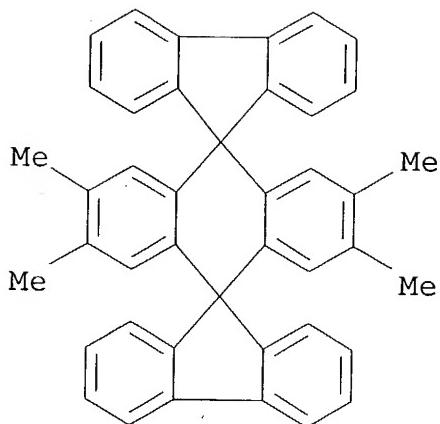
RN 484687-29-8 ZCPLUS

CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluorene],
2',3'-dimethyl- (9CI) (CA INDEX NAME)



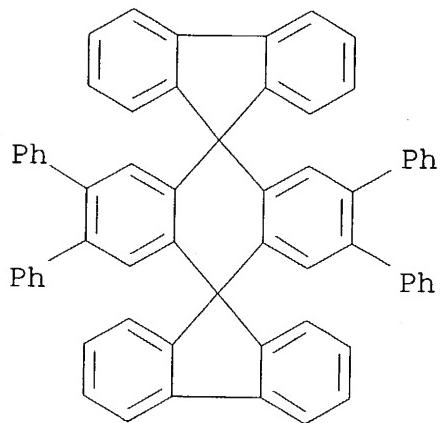
RN 484687-30-1 ZCPLUS

CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluorene],
2',3',6',7'-tetramethyl- (9CI) (CA INDEX NAME)



RN 484687-31-2 ZCPLUS

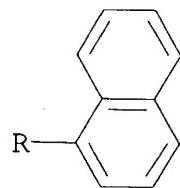
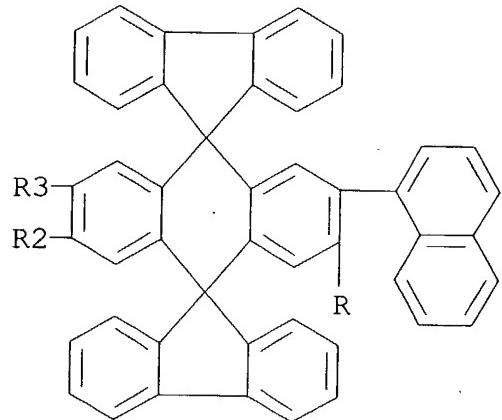
CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9'''-9H]fluorene],
2',3',6',7'-tetraphenyl- (9CI) (CA INDEX NAME)



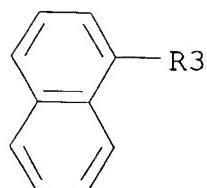
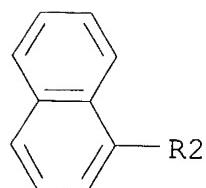
RN 484687-32-3 ZCPLUS

CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9'''-9H]fluorene],
2',3',6',7'-tetra-1-naphthalenyl- (9CI) (CA INDEX NAME)

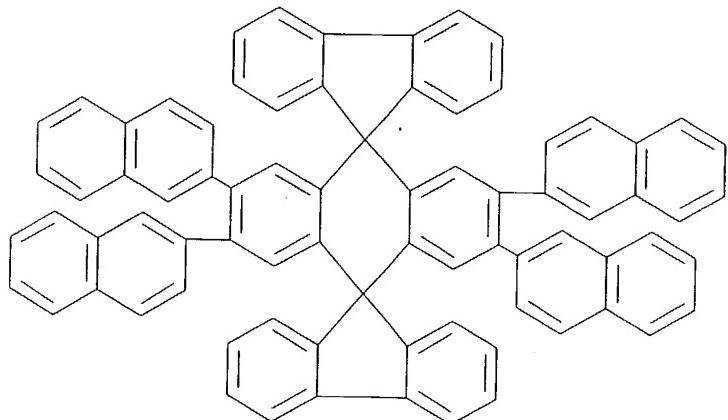
PAGE 1-A



PAGE 2-A



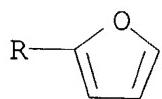
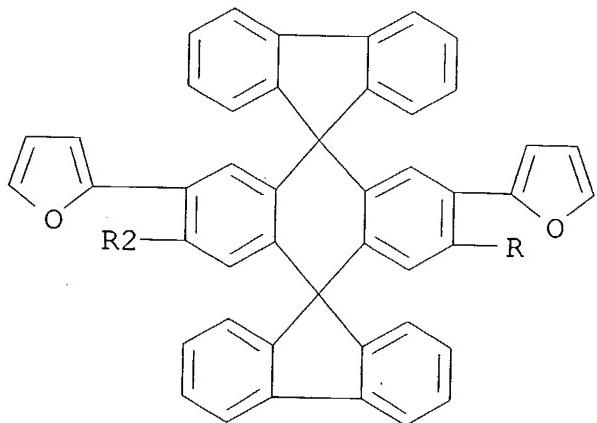
CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9'''-[9H]fluorene],
2',3',6',7'-tetra-2-naphthalenyl- (9CI) (CA INDEX NAME)



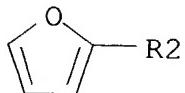
RN 484687-34-5 ZCPLUS

CN Furan, 2,2',2'',2'''-dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9'''-[9H]fluorene]-2',3',6',7'-tetracyltetrakis- (9CI) (CA INDEX NAME)

PAGE 1-A



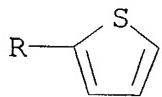
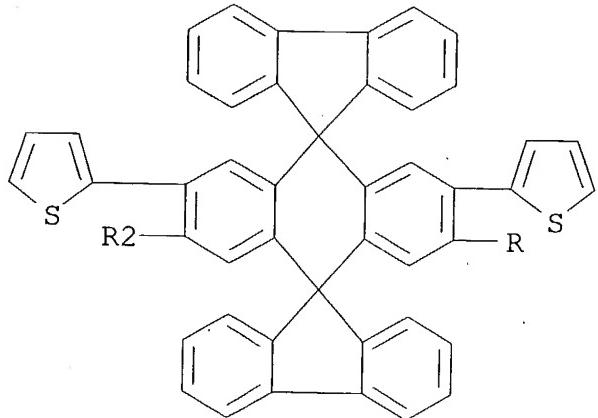
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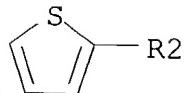
RN 484687-35-6 ZCPLUS

CN Thiophene, 2,2',2'',2'''-dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluorene]-2',3',6',7'-tetrayltetrakis- (9CI) (CA INDEX NAME)

PAGE 1-A



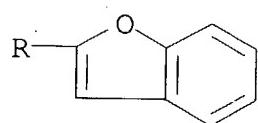
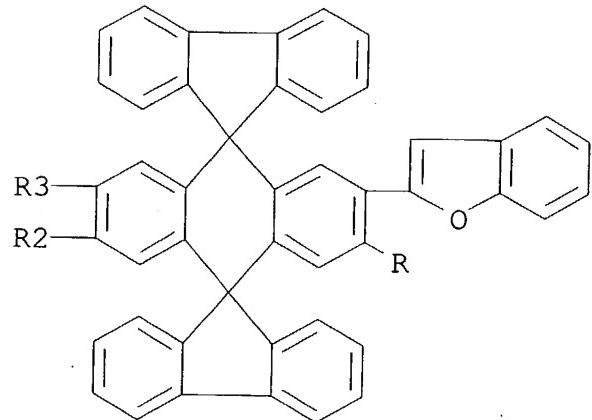
PAGE 2-A



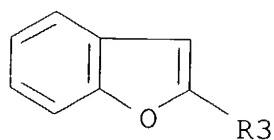
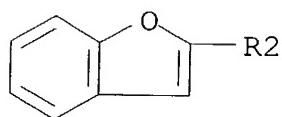
RN 484687-36-7 ZCPLUS

CN Benzofuran, 2,2',2'',2'''-dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluorene]-2',3',6',7'-tetrayltetrakis- (9CI) (CA INDEX NAME)

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IT 484687-26-5 484687-27-6 484687-28-7
 484687-29-8 484687-30-1 484687-31-2
 484687-32-3 484687-33-4 484687-34-5
 484687-35-6 484687-36-7

(novel spirocyclic deriv. for org. electroluminescent devices)

ACCESSION NUMBER: 2002:849756 ZCPLUS
 DOCUMENT NUMBER: 137:360139
 TITLE: Double-spiro organic compounds and
electroluminescent devices
 INVENTOR(S): Kim, Kong-Kyeum; Son, Se-Hwan; Yoon, Seok-Hee;
Bae, Jae-Sooon; Lee, Youn-Gu; Im, Sung-Gap; Kim,
Ji-Eun; Lee, Jae-Chol
 PATENT ASSIGNEE(S): LG Chem, Ltd., S. Korea
 SOURCE: PCT Int. Appl., 117 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 2002088274	A1	20021107	WO 2002-KR458	200203 18
W: CN, JP				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
KR 2002083614	A	20021104	KR 2001-23038	200104 27
KR 2002083615	A	20021104	KR 2001-23039	200104 27
US 2004023060	A1	20040205	US 2002-99781	200203 14
EP 1294823	A1	20030326	EP 2002-705589	200203 18
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JP 2004529937	T2	20040930	JP 2002-585559	200203 18
US 2004170863	A1	20040902	US 2003-718083	200311 19
PRIORITY APPLN. INFO.:			KR 2001-23038	A
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KR 2001-23039

A

200104
27

US 2002-99781

A3

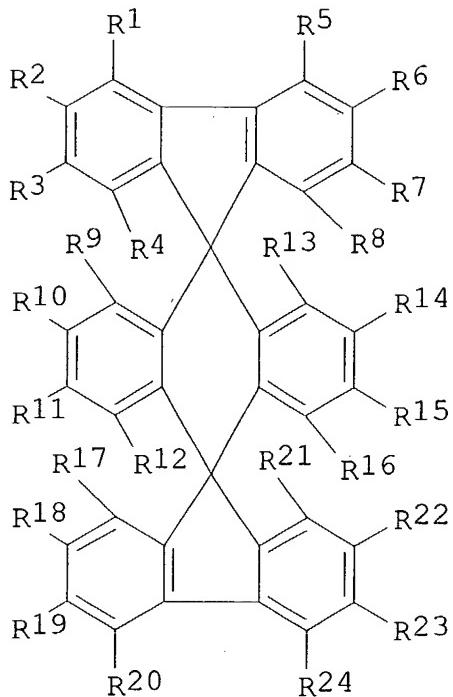
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OTHER SOURCE (S) : MARPAT 137:360139
 GI



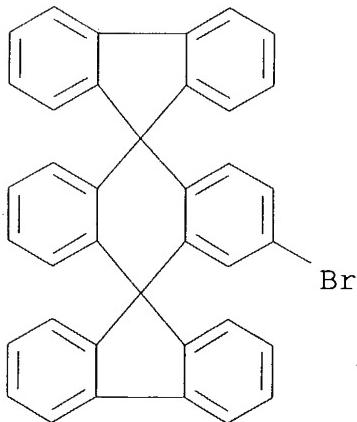
AB Double-spiro org. compds. are claimed which are described by the general formula I (R1-24 = independently selected substituents not all of which are H). Light-emitting, hole-transporting, and electron-transporting materials comprising the compds. are also described. Electroluminescent materials comprising the compds., including deposited films, methods for depositing the materials, and

org. electroluminescent devices employing the materials, and method for fabricating the devices, are also described.

IT 474687-62-2D, derivs. 474687-68-8D, derivs.
 474687-72-4 474687-74-6D, derivs.
 474687-77-9D, derivs. 474687-79-1D, derivs.
 474687-89-3 474687-90-6 474687-93-9
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 474688-11-4 474688-12-5 474688-13-6
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 474688-68-1 474688-69-2
 (double-spiro org. compds. and electroluminescent devices using them)

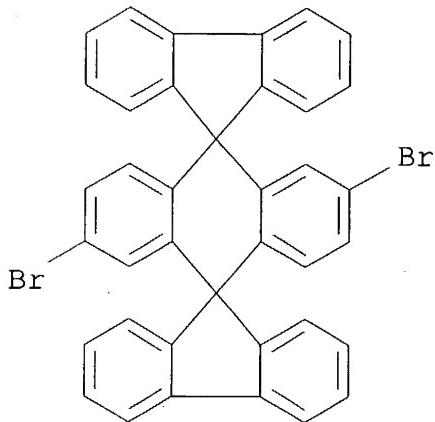
RN 474687-62-2 ZCPLUS

CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluorene],
 2'-bromo- (9CI) (CA INDEX NAME)



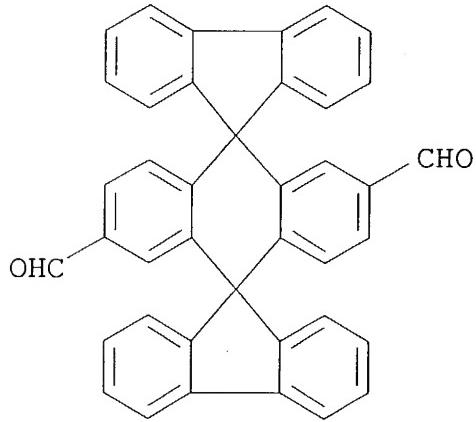
RN 474687-68-8 ZCPLUS

CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluorene],
2',6'-dibromo- (9CI) (CA INDEX NAME)



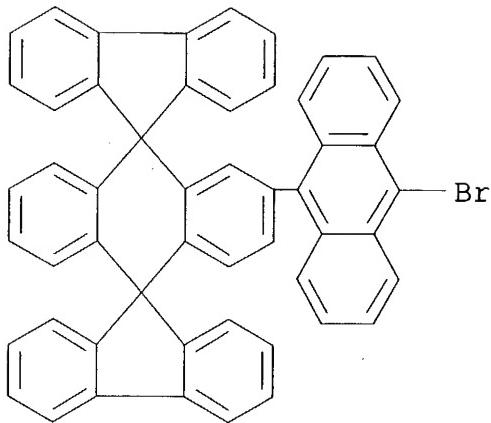
RN 474687-72-4 ZCPLUS

CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluorene]-
2',6'-dicarboxaldehyde (9CI) (CA INDEX NAME)



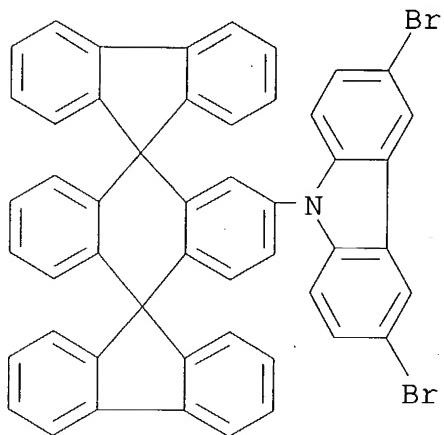
RN 474687-74-6 ZCPLUS

CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluorene],
2'-(10-bromo-9-anthracyl)- (9CI) (CA INDEX NAME)



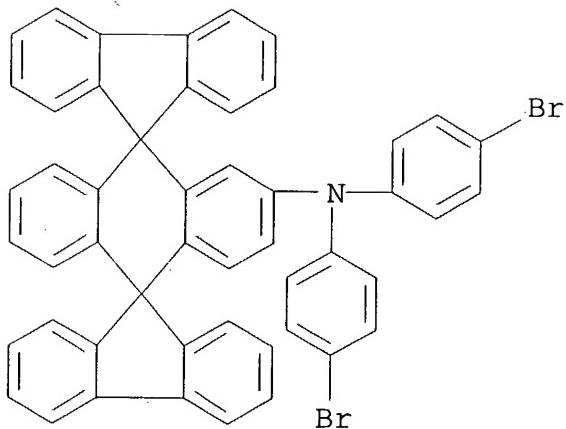
RN 474687-77-9 ZCPLUS

CN 9H-Carbazole, 3,6-dibromo-9-dispiro[9H-fluorene-9,9'-(10'H)-anthracene-10',9''-[9H]fluoren]-2'-yl- (9CI) (CA INDEX NAME)



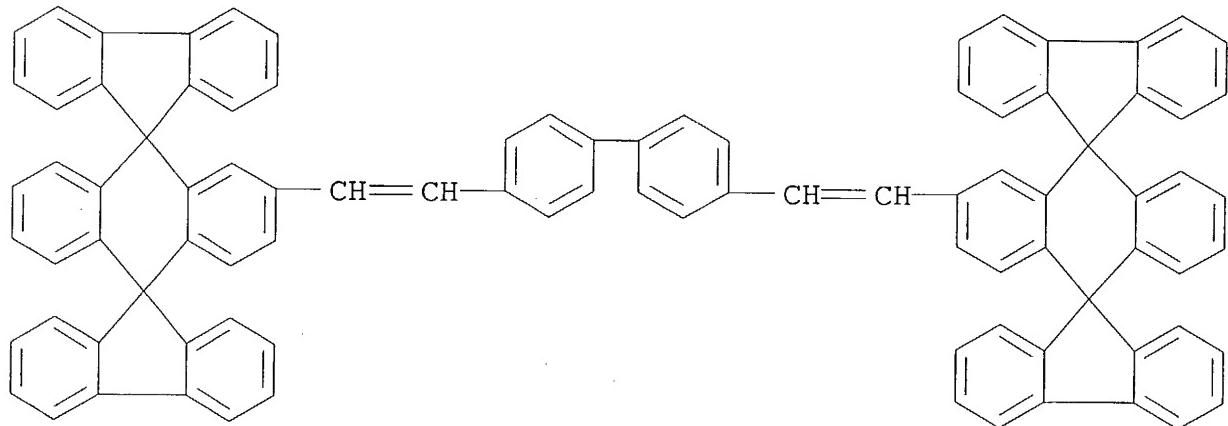
RN 474687-79-1 ZCPLUS

CN Dispiro[9H-fluorene-9,9'-(10'H)-anthracene-10',9''-[9H]fluoren]-2'-amine, N,N-bis(4-bromophenyl)- (9CI) (CA INDEX NAME)



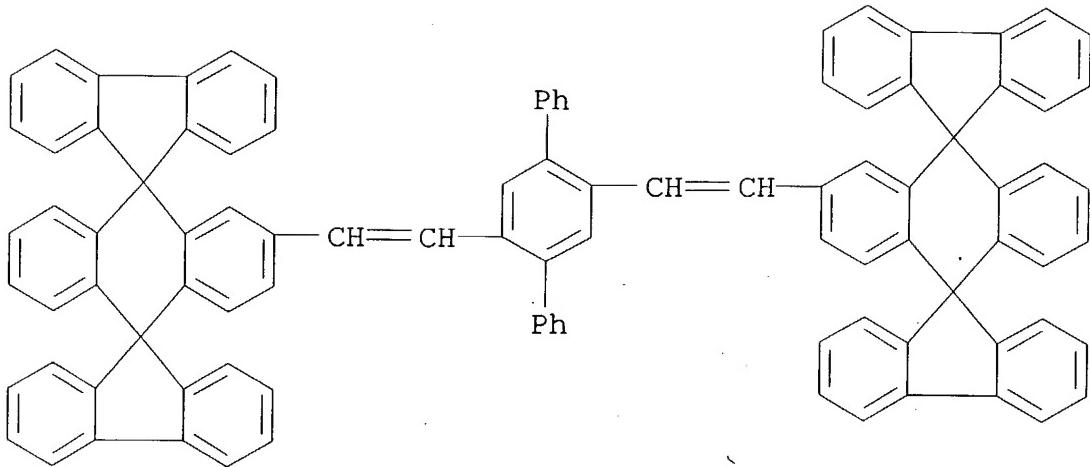
RN 474687-89-3 ZCPLUS

CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9'''-[9H]fluorene],
2',2''''-([1,1'-biphenyl]-4,4'-diyldi-2,1-ethenediyl)bis- (9CI) (CA
INDEX NAME)



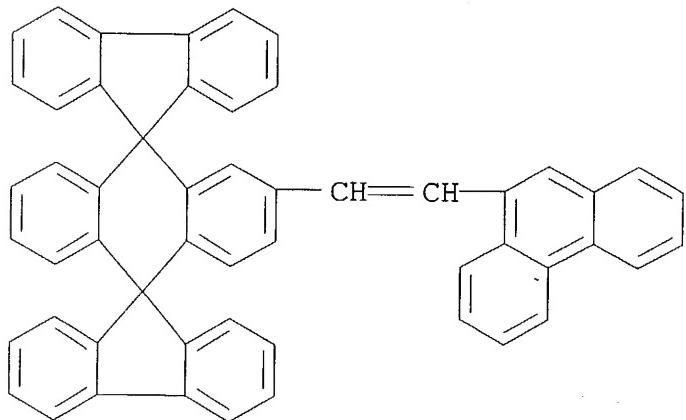
RN 474687-90-6 ZCPLUS

CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9'''-[9H]fluorene],
2',2''''-([1,1':4',1'''-terphenyl]-2',5'-diyldi-2,1-ethenediyl)bis-
(9CI) (CA INDEX NAME)



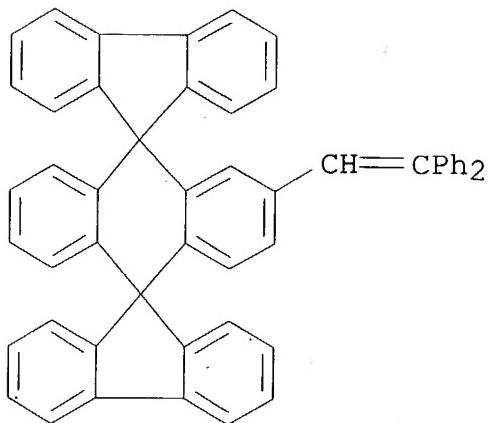
RN 474687-93-9 ZCPLUS

CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluorene],
2'-(2-(9-phenanthrenyl)ethenyl]- (9CI) (CA INDEX NAME)



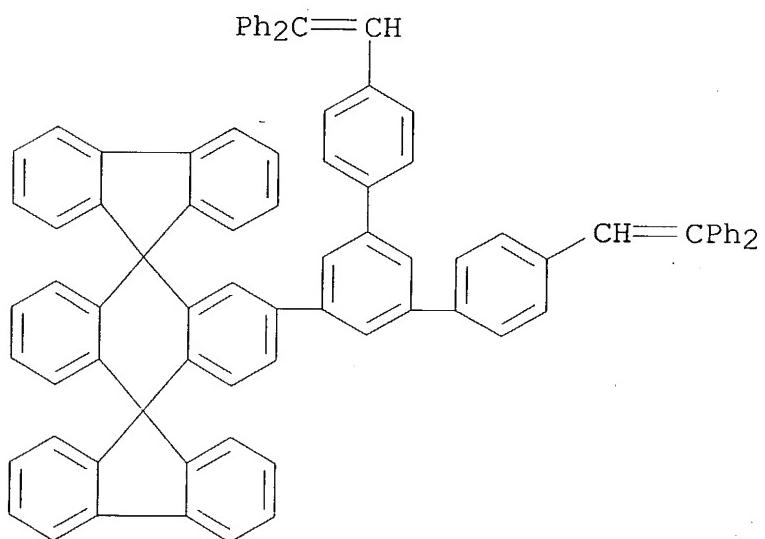
RN 474687-95-1 ZCPLUS

CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluorene],
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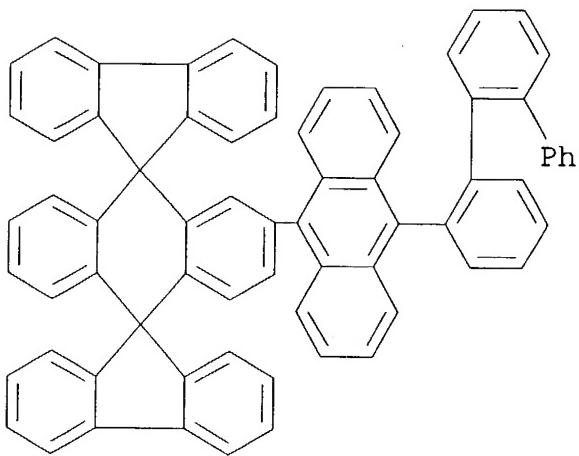
RN 474687-97-3 ZCPLUS

CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluorene],
2'-[4,4''-bis(2,2-diphenylethenyl)[1,1':3',1'''-terphenyl]-5'-yl]-
(9CI) (CA INDEX NAME)



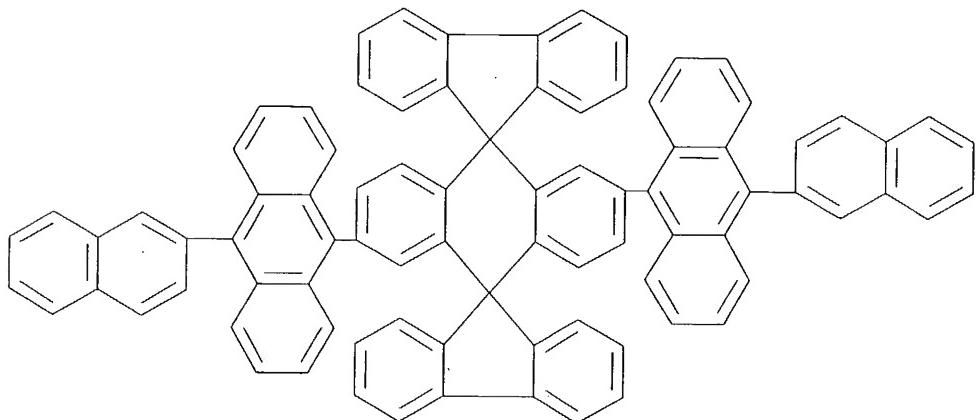
RN 474688-01-2 ZCPLUS

CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluorene],
2'-(10-[1,1':2',1'''-terphenyl]-2-yl-9-anthracyenyl)- (9CI) (CA INDEX
NAME)



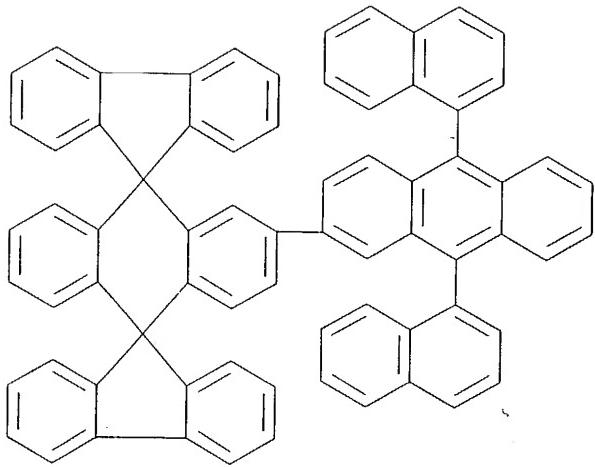
RN 474688-04-5 ZCPLUS

CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluorene],
2',6'-bis[10-(2-naphthalenyl)-9-anthracyanyl]- (9CI) (CA INDEX NAME)



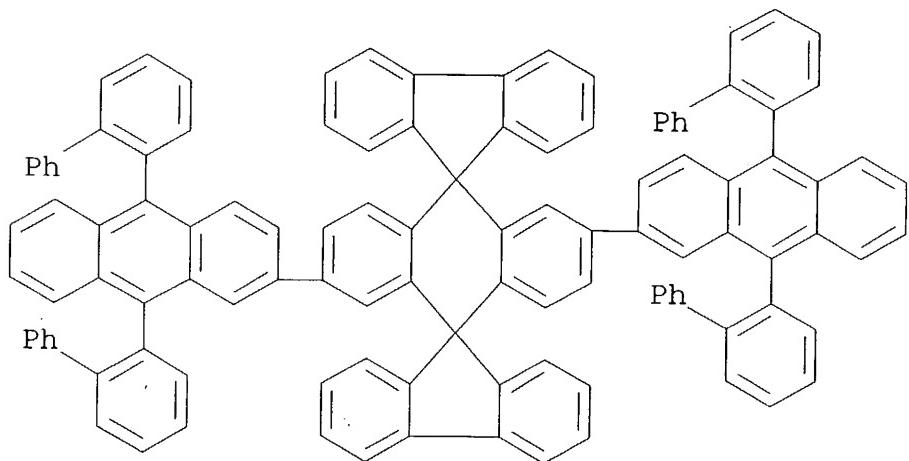
RN 474688-09-0 ZCPLUS

CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluorene],
2'-(9,10-di-1-naphthalenyl-2-anthracyanyl)- (9CI) (CA INDEX NAME)



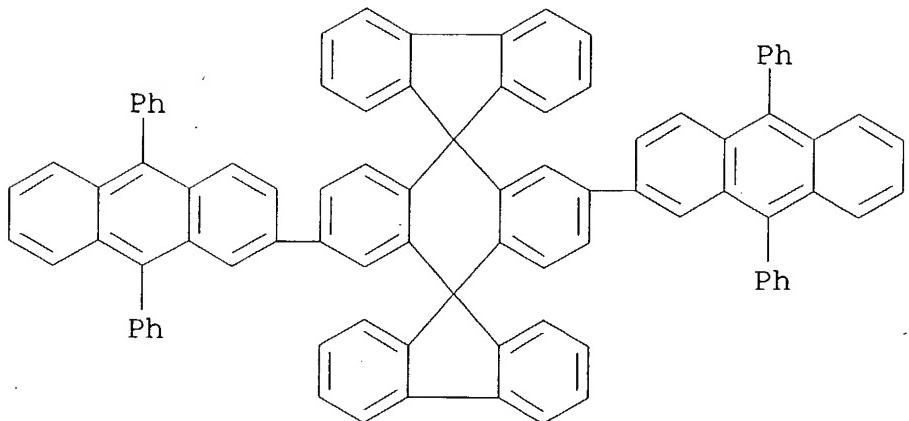
RN 474688-10-3 ZCPLUS

CN Dispiro[9H-fluorene-9,9' (10'H)-anthracene-10',9''-[9H]fluorene],
2',6'-bis[9,10-bis([1,1'-biphenyl]-2-yl)-2-anthracenyl]- (9CI) (CA
INDEX NAME)



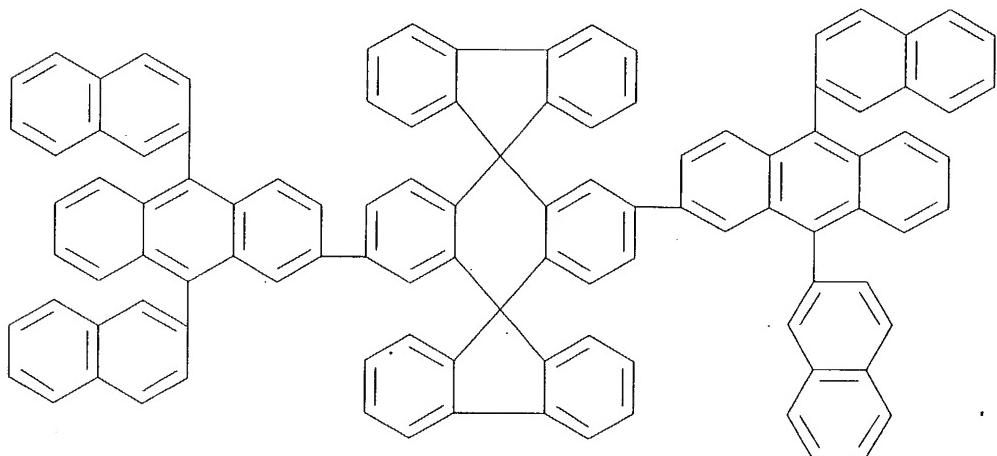
RN 474688-11-4 ZCPLUS

CN Dispiro[9H-fluorene-9,9' (10'H)-anthracene-10',9''-[9H]fluorene],
2',6'-bis(9,10-diphenyl-2-anthracenyl)- (9CI) (CA INDEX NAME)



RN 474688-12-5 ZCPLUS

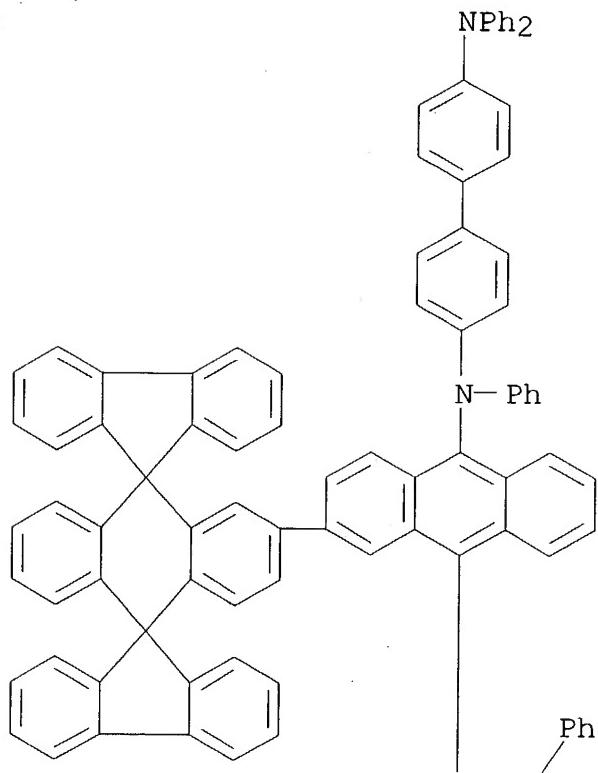
CN Dispiro[9H-fluorene-9,9' (10'H)-anthracene-10',9'''-[9H]fluorene],
2',6'-bis[9,10-bis(2-naphthalenyl)-2-anthracenyl]- (9CI) (CA INDEX
NAME)



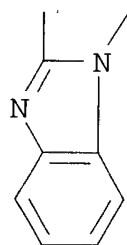
RN 474688-13-6 ZCPLUS

CN [1,1'-Biphenyl]-4,4'-diamine, N-[3-dispiro[9H-fluorene-9,9' (10'H)-
anthracene-10',9'''-[9H]fluoren]-2'-yl-10-(1-phenyl-1H-benzimidazol-2-
yl)-9-anthracenyl]-N,N',N'-triphenyl- (9CI) (CA INDEX NAME)

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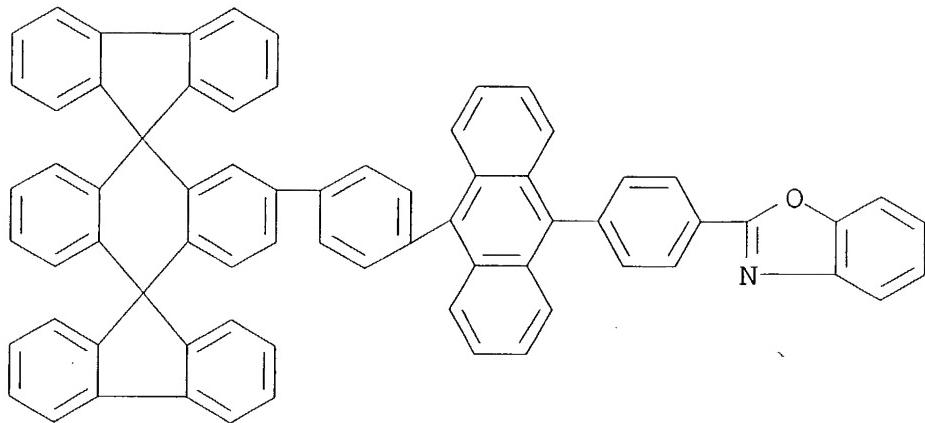


PAGE 2-A



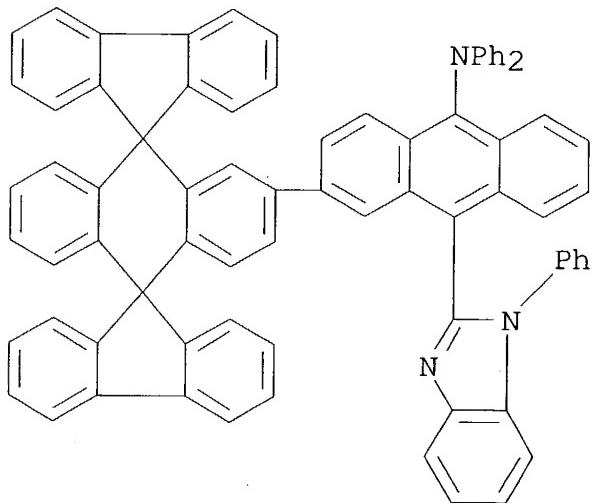
RN 474688-14-7 ZCPLUS

CN Benzoxazole, 2-[4-[10-(4-dispiro[9H-fluorene-9,9'-(10'H)-anthracene-10',9''-[9H]fluoren]-2'-ylphenyl)-9-anthracyenyl]phenyl]- (9CI) (CA INDEX NAME)



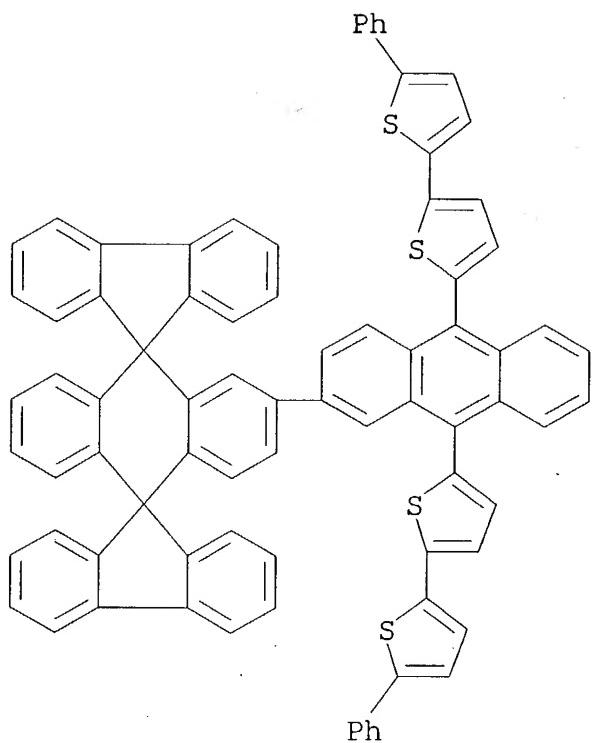
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CN 9-Anthracenamine, 3-dispiro[9H-fluorene-9,9'-(10'H)-anthracene-10',9'''-[9H]fluoren]-2'-yl-N,N-diphenyl-10-(1-phenyl-1H-benzimidazol-2-yl)-(9CI) (CA INDEX NAME)



RN 474688-16-9 ZCPLUS

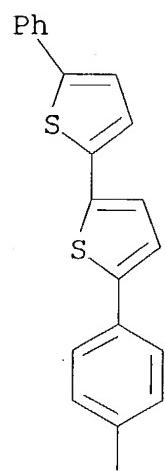
CN 2,2'-Bithiophene, 5,5''-(2-dispiro[9H-fluorene-9,9'-(10'H)-anthracene-10',9'''-[9H]fluoren]-2'-yl-9,10-anthracenediyl)bis[5'-phenyl- (9CI) (CA INDEX NAME)



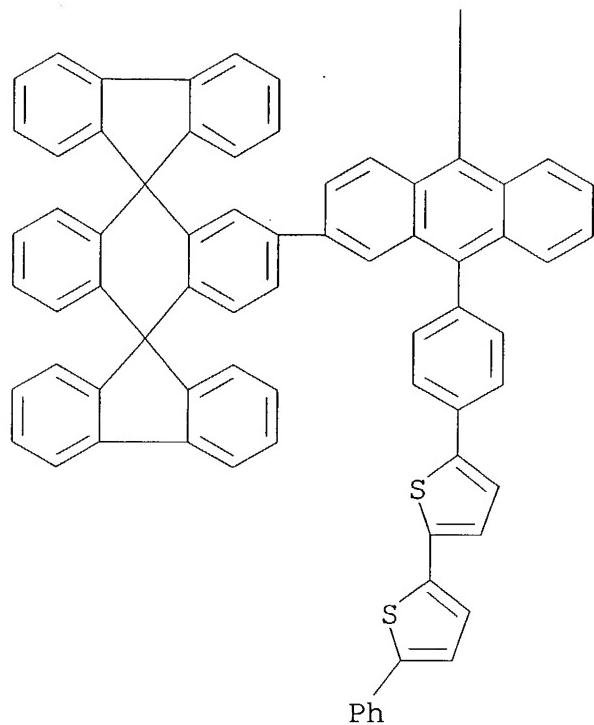
RN 474688-17-0 ZCPLUS

CN 2,2'-Bithiophene, 5,5''-[(2-dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9'''-[9H]fluoren]-2'-yl-9,10-anthracenediyl)di-4,1-phenylene]bis[5'-phenyl-] (9CI) (CA INDEX NAME)

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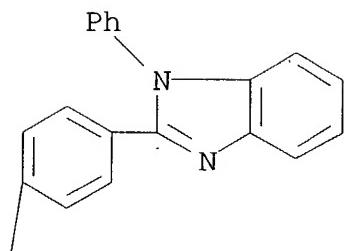
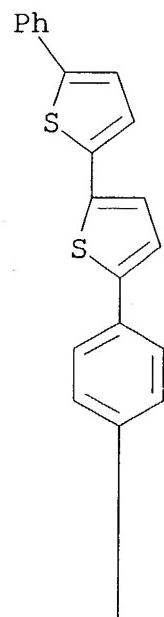
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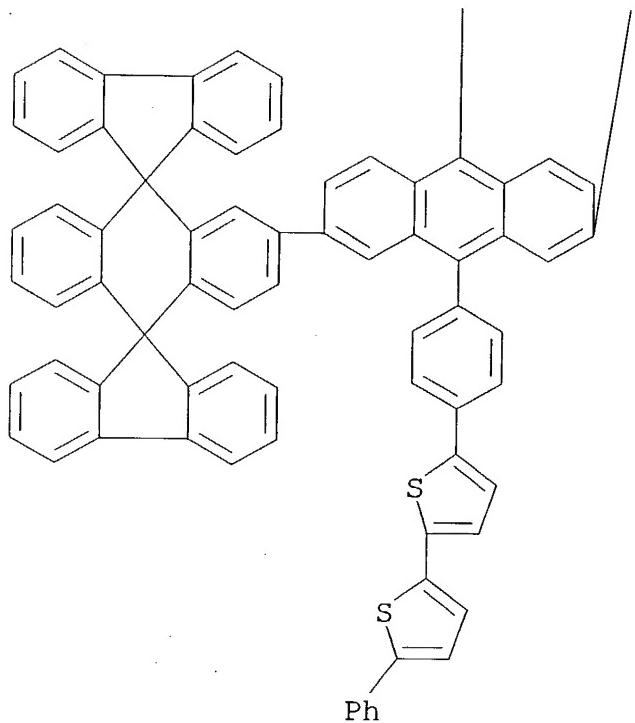
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CN 1H-Benzimidazole, 2-[4-[7-dispiro[9H-fluorene-9,9'-(10'H)-anthracene-10',9''-[9H]fluoren]-2'-yl-9,10-bis[4-(5'-phenyl[2,2'-bithiophen]-5-yl)phenyl]-2-anthracenylphenyl]-1-phenyl- (9CI) (CA INDEX NAME)

PAGE 1-A

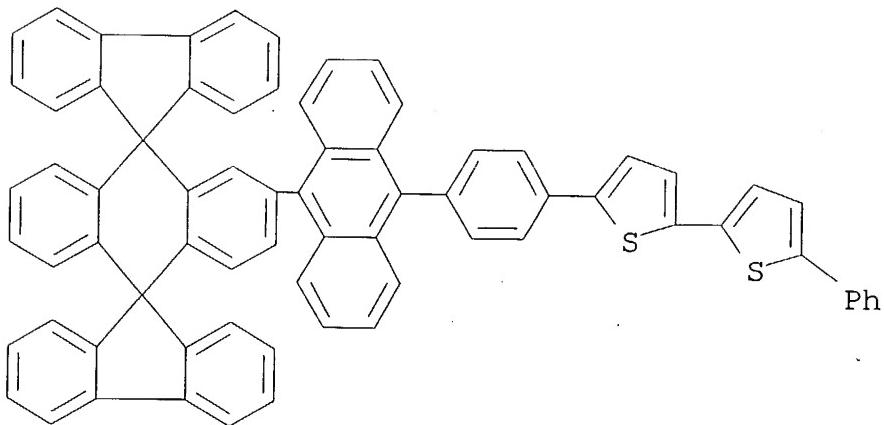


PAGE 2-A



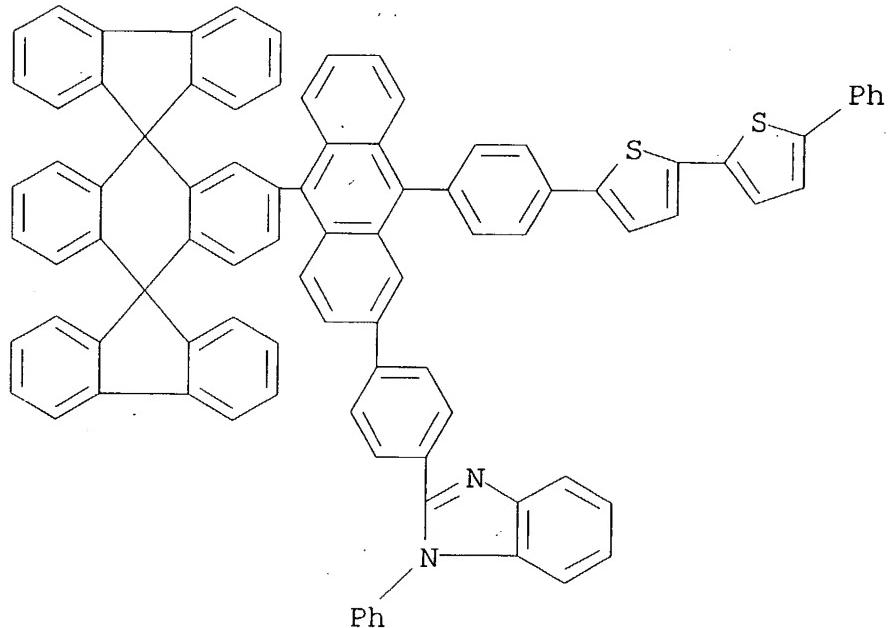
RN 474688-19-2 ZCPLUS

CN 2,2'-Bithiophene, 5-[4-(10-dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluoren]-2'-yl-9-anthracyl)phenyl]-5'-phenyl- (9CI)
(CA INDEX NAME)



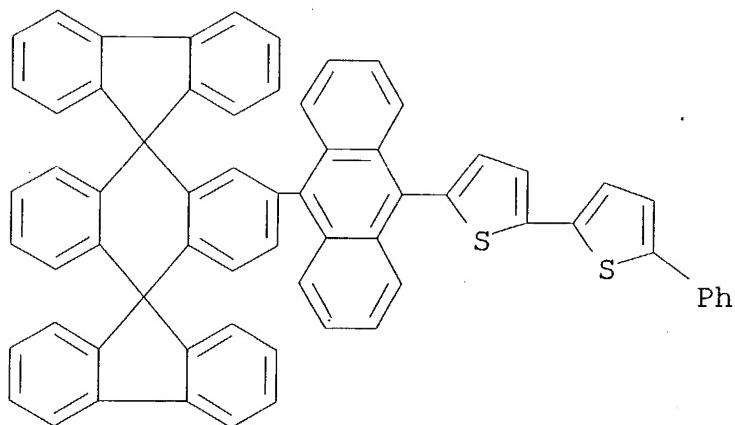
RN 474688-20-5 ZCPLUS

CN 1H-Benzimidazole, 2-[4-[10-dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9'''-[9H]fluoren]-2'-yl-9-[4-(5'-phenyl[2,2'-bithiophen]-5-yl)phenyl]-2-anthracyl]phenyl]-1-phenyl- (9CI) (CA INDEX NAME)



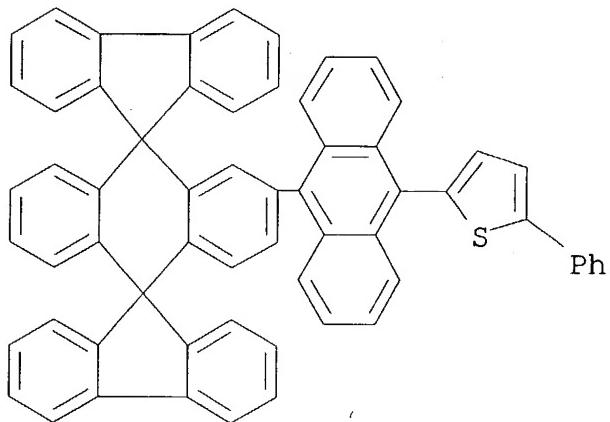
RN 474688-21-6 ZCPLUS

CN 2,2'-Bithiophene, 5-(10-dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9'''-[9H]fluoren]-2'-yl-9-anthracyl)-5'-phenyl- (9CI) (CA INDEX NAME)



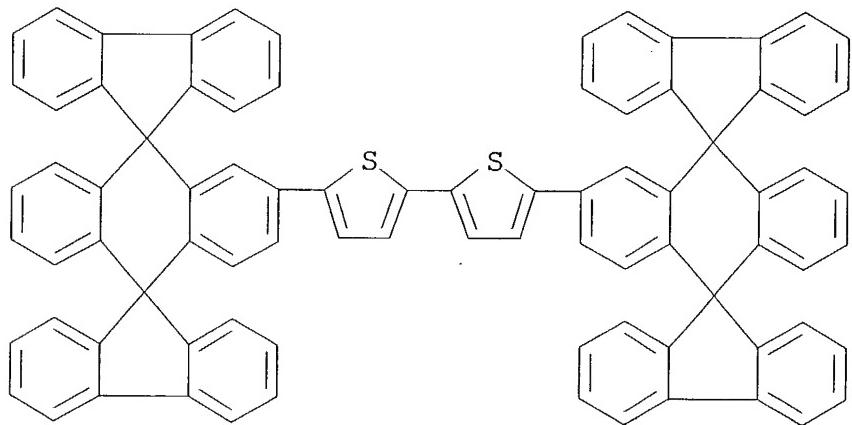
RN 474688-22-7 ZCPLUS

CN Thiophene, 2-(10-dispiro[9H-fluorene-9,9'-(10'H)-anthracene-10',9''-[9H]fluoren]-2'-yl-9-anthracyl)-5-phenyl- (9CI) (CA INDEX NAME)



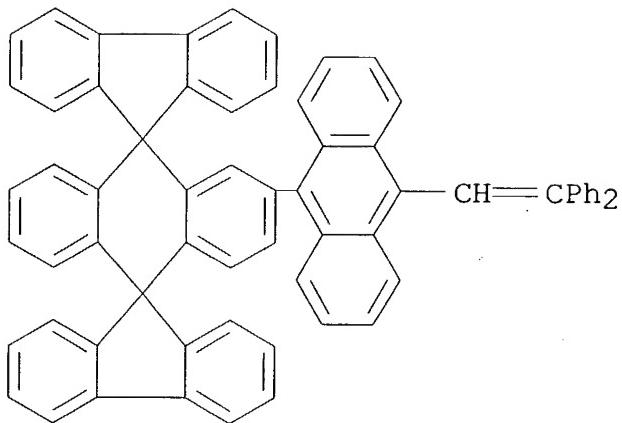
RN 474688-23-8 ZCPLUS

CN 2,2'-Bithiophene, 5,5'-bis(dispiro[9H-fluorene-9,9'-(10'H)-anthracene-10',9''-[9H]fluoren]-2'-yl)- (9CI) (CA INDEX NAME)



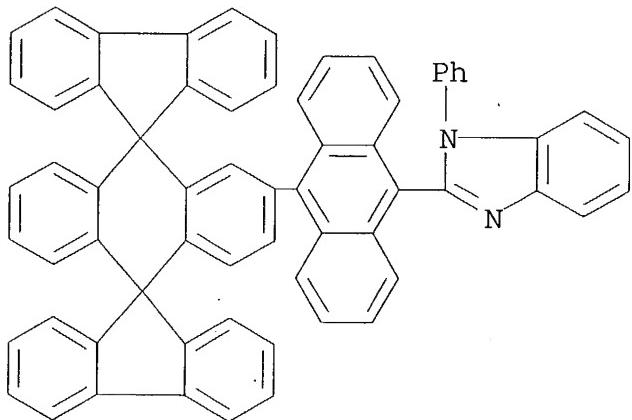
RN 474688-25-0 ZCPLUS

CN Dispiro[9H-fluorene-9,9'-(10'H)-anthracene-10',9''-[9H]fluorene], 2'-(10-(2,2-diphenylethenyl)-9-anthracyl)- (9CI) (CA INDEX NAME)



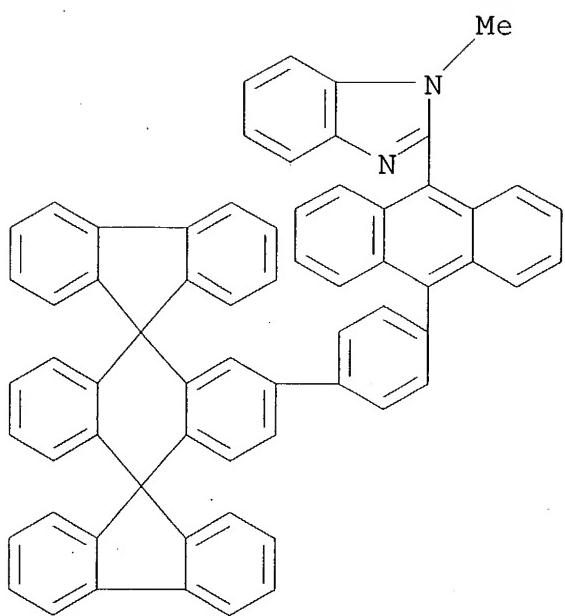
RN 474688-26-1 ZCPLUS

CN 1H-Benzimidazole, 2-(10-dispiro[9H-fluorene-9,9' (10'H)-anthracene-10',9'''-[9H]fluoren]-2'-yl-9-anthracyl)-1-phenyl- (9CI) (CA INDEX NAME)



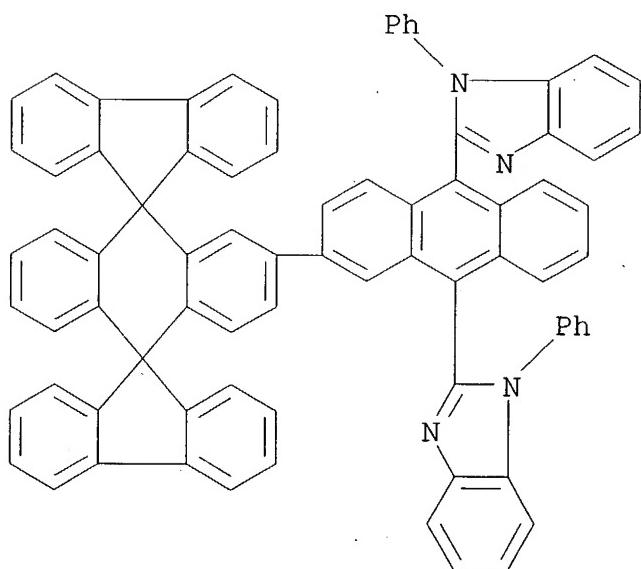
RN 474688-27-2 ZCPLUS

CN 1H-Benzimidazole, 2-[10-(4-dispiro[9H-fluorene-9,9' (10'H)-anthracene-10',9'''-[9H]fluoren]-2'-ylphenyl)-9-anthracyl]-1-methyl- (9CI) (CA INDEX NAME)



RN 474688-28-3 ZCPLUS

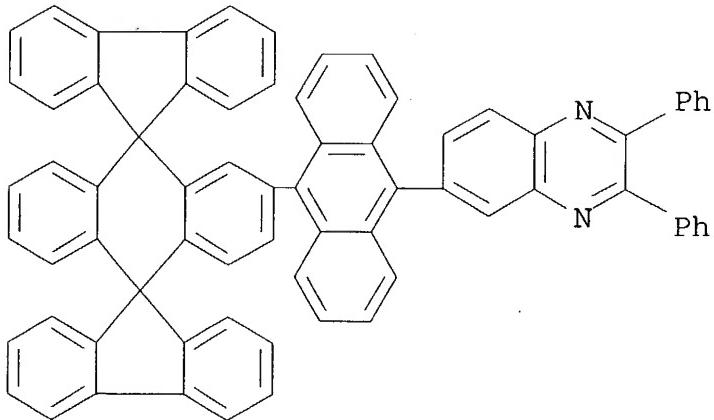
CN 1H-Benzimidazole, 2,2'-(2-dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluoren]-2'-yl-9,10-anthracenediyl)bis[1-phenyl- (9CI) (CA INDEX NAME)



RN 474688-29-4 ZCPLUS

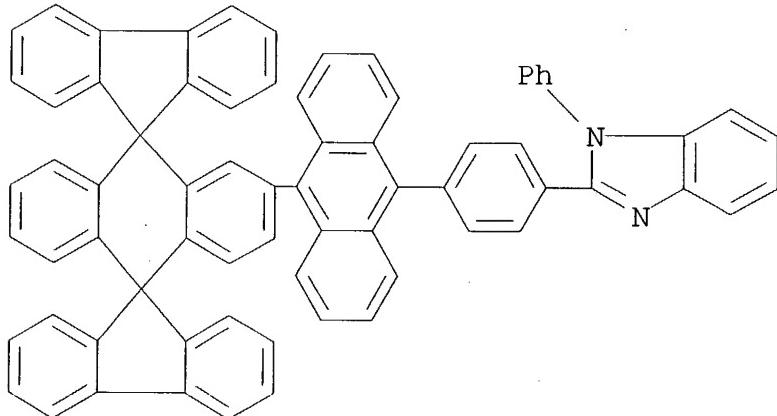
CN Quinoxaline, 6-(10-dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-

[9H]fluoren]-2'-yl-9-anthracenyl)-2,3-diphenyl- (9CI) (CA INDEX NAME)



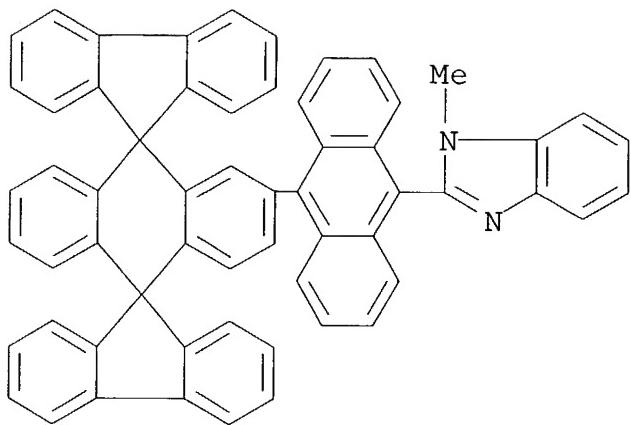
RN 474688-30-7 ZCPLUS

CN 1H-Benzimidazole, 2-[4-(10-dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9'']-[9H]fluoren]-2'-yl-9-anthracenyl)phenyl]-1-phenyl- (9CI) (CA INDEX NAME)



RN 474688-31-8 ZCPLUS

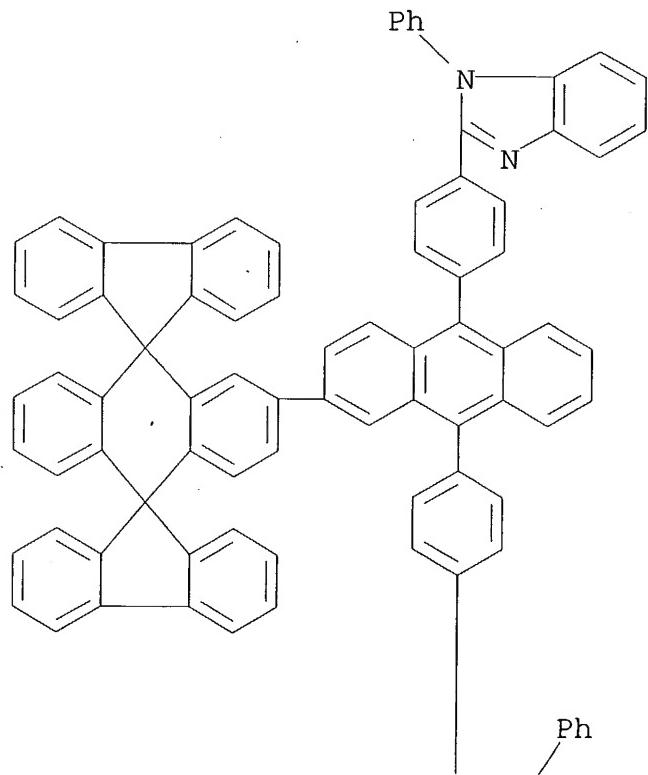
CN 1H-Benzimidazole, 2-(10-dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9'']-[9H]fluoren]-2'-yl-9-anthracenyl)-1-methyl- (9CI) (CA INDEX NAME)



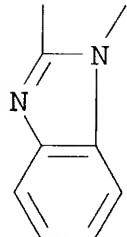
RN 474688-32-9 ZCPLUS

CN 1H-Benzimidazole, 2,2'-(2-dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluoren]-2'-yl-9,10-anthracenediyl)di-4,1-phenylene]bis[1-phenyl- (9CI) (CA INDEX NAME)

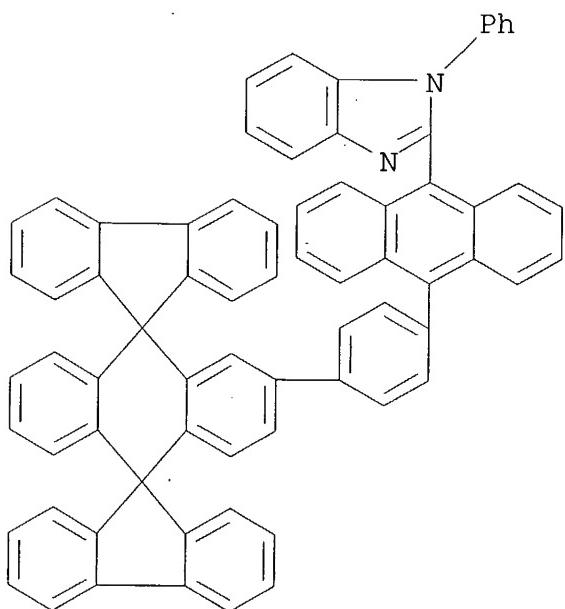
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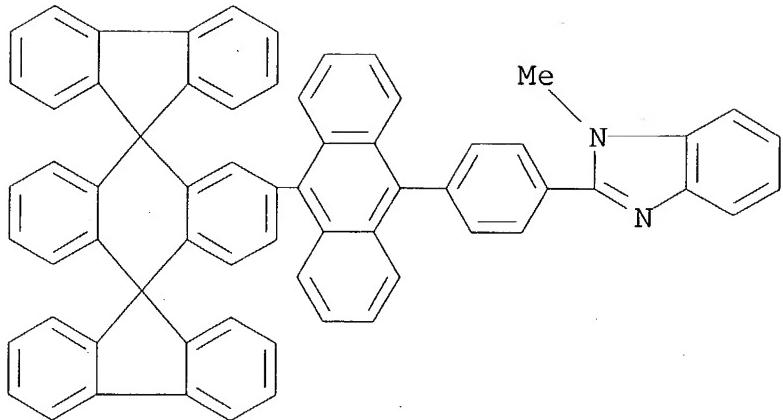


RN 474688-33-0 ZCPLUS

CN 1H-Benzimidazole, 2-[10-(4-dispiro[9H-fluorene-9,9'-(10'H)-anthracene-10',9''-[9H]fluoren]-2'-ylphenyl)-9-anthracyl]-1-phenyl- (9CI)
(CA INDEX NAME)

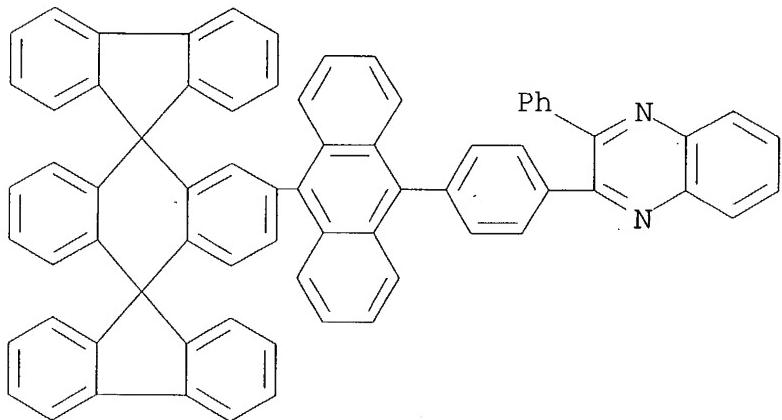
RN 474688-34-1 ZCPLUS

CN 1H-Benzimidazole, 2-[4-(10-dispiro[9H-fluorene-9,9'-(10'H)-anthracene-10',9''-[9H]fluoren]-2'-yl-9-anthracyl)phenyl]-1-methyl- (9CI)
(CA INDEX NAME)



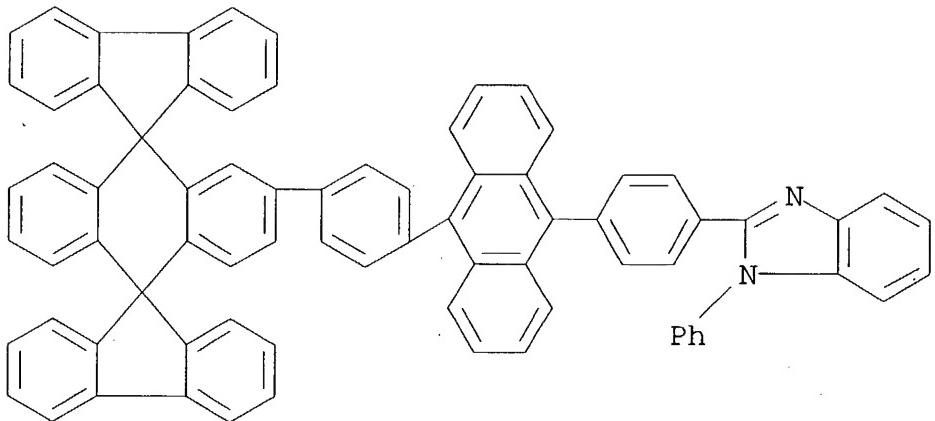
RN 474688-35-2 ZCPLUS

CN Quinoxaline, 2-[4-(10-dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluoren]-2'-yl-9-anthracyl)phenyl]-3-phenyl- (9CI)
(CA INDEX NAME)



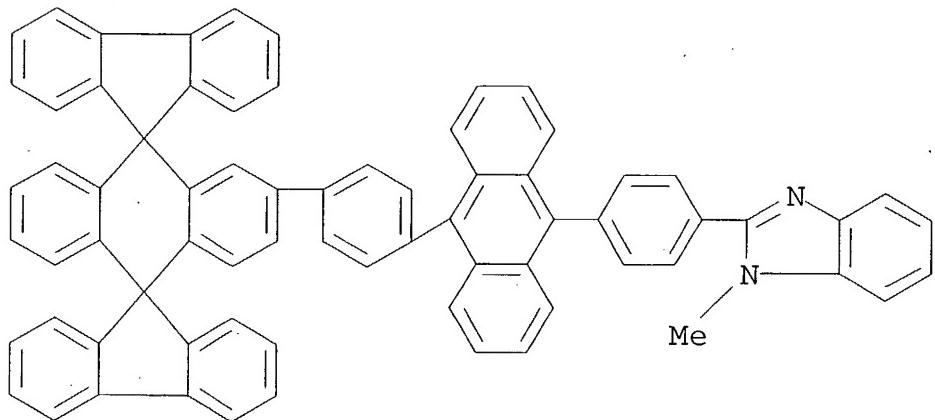
RN 474688-36-3 ZCPLUS

CN 1H-Benzimidazole, 2-[4-[10-(4-dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluoren]-2'-ylphenyl)-9-anthracyl]phenyl]-1-phenyl- (9CI) (CA INDEX NAME)



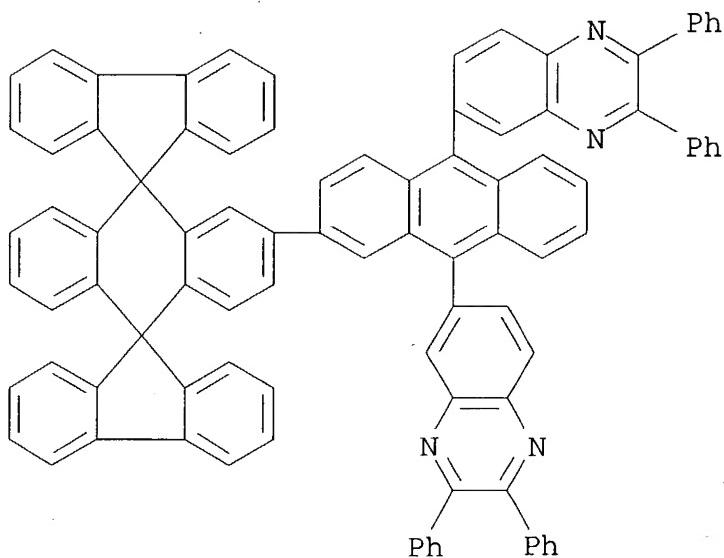
RN 474688-37-4 ZCPLUS

CN 1H-Benzimidazole, 2-[4-[10-(4-dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluoren]-2'-ylphenyl)-9-anthracenyl]phenyl]-1-methyl- (9CI) (CA INDEX NAME)



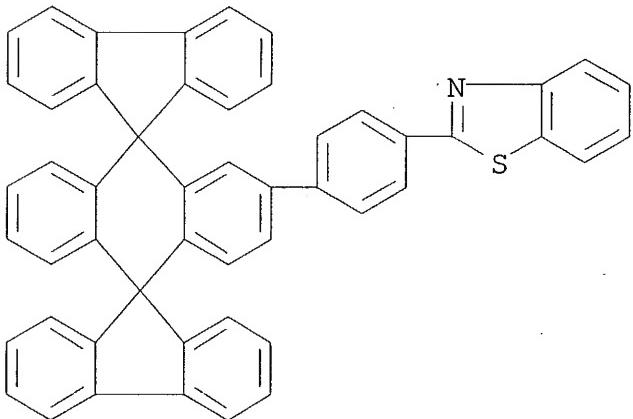
RN 474688-38-5 ZCPLUS

CN Quinoxaline, 6,6'-(2-dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluoren]-2'-yl-9,10-anthracenediyl)bis[2,3-diphenyl- (9CI) (CA INDEX NAME)



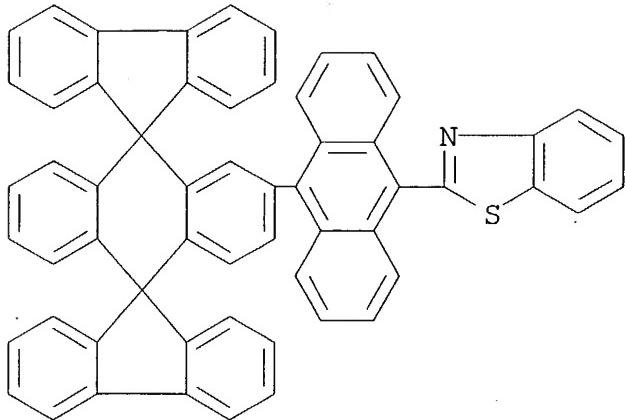
RN 474688-39-6 ZCPLUS

CN Benzothiazole, 2-(4-dispiro[9H-fluorene-9,9'-(10'H)-anthracene-10',9''-[9H]fluoren]-2'-ylphenyl)- (9CI) (CA INDEX NAME)



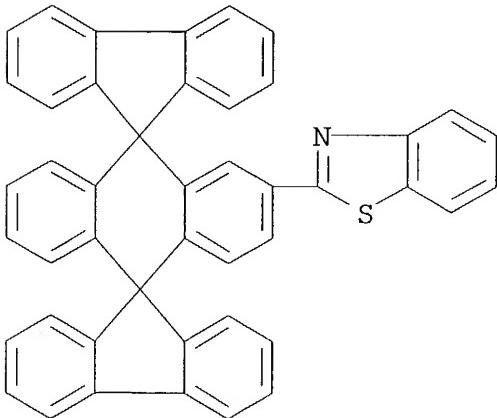
RN 474688-40-9 ZCPLUS

CN Benzothiophene, 2-(10-dispiro[9H-fluorene-9,9'-(10'H)-anthracene-10',9''-[9H]fluoren]-2'-yl-9-anthracyl)- (9CI) (CA INDEX NAME)



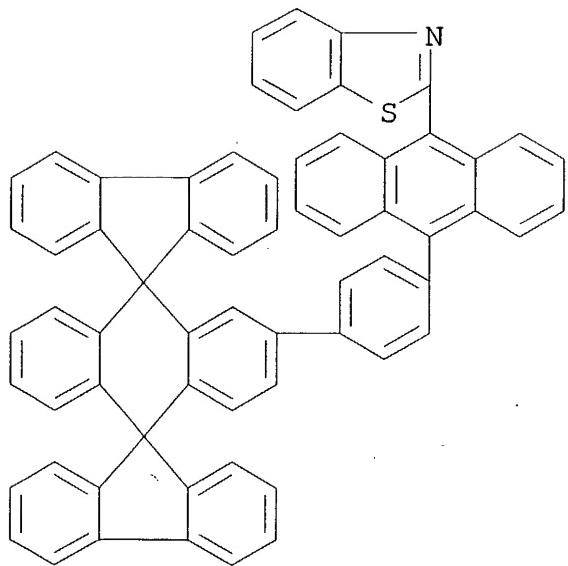
RN 474688-41-0 ZCAPLUS

CN Benzothiazole, 2-dispiro[9H-fluorene-9,9'-(10'H)-anthracene-10',9''-[9H]fluoren]-2'-yl- (9CI) (CA INDEX NAME)



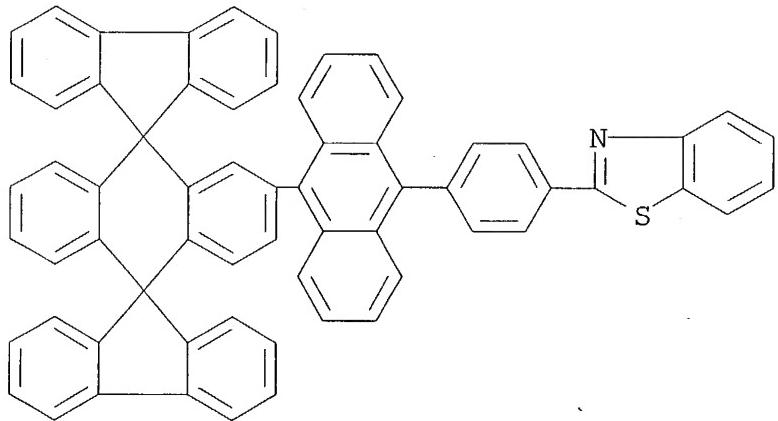
RN 474688-42-1 ZCAPLUS

CN Benzothiazole, 2-[10-(4-dispiro[9H-fluorene-9,9'-(10'H)-anthracene-10',9''-[9H]fluoren]-2'-ylphenyl)-9-anthracyanyl]- (9CI) (CA INDEX NAME)



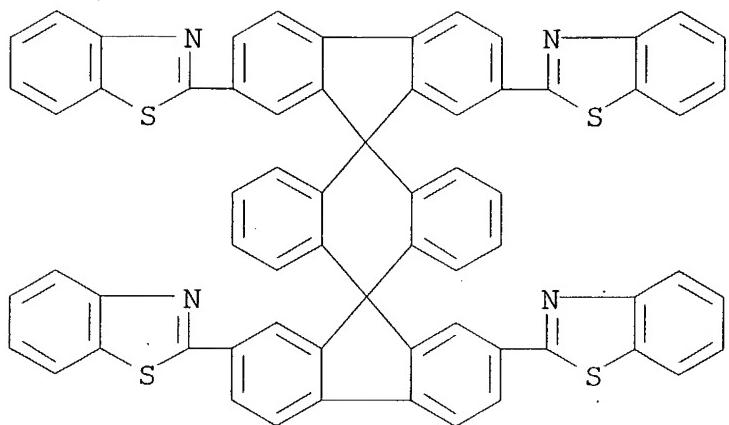
RN 474688-43-2 ZCPLUS

CN Benzothiazole, 2-[4-(10-dispiro[9H-fluorene-9,9'-(10'H)-anthracene-10',9''-[9H]fluoren]-2'-yl-9-anthracenyl)phenyl]- (9CI) (CA INDEX NAME)



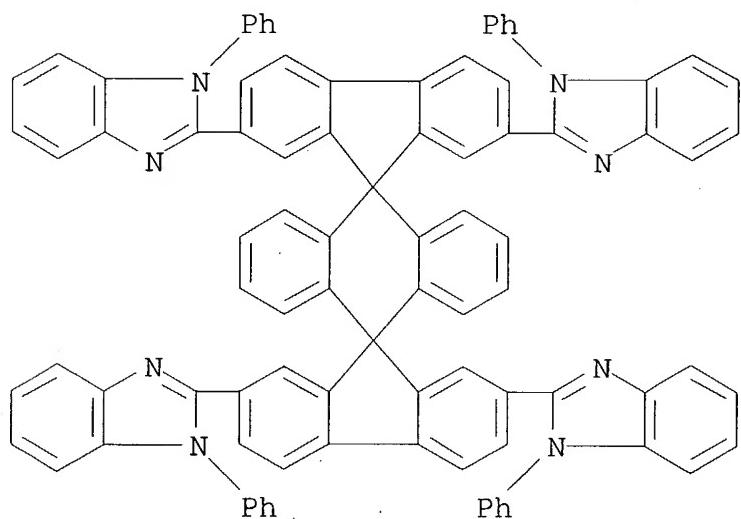
RN 474688-44-3 ZCPLUS

CN Benzothiazole, 2,2',2'',2'''-dispiro[9H-fluorene-9,9'-(10'H)-anthracene-10',9''-[9H]fluoren]-2,2'',7,7'''-tetrayltetrakis- (9CI) (CA INDEX NAME)



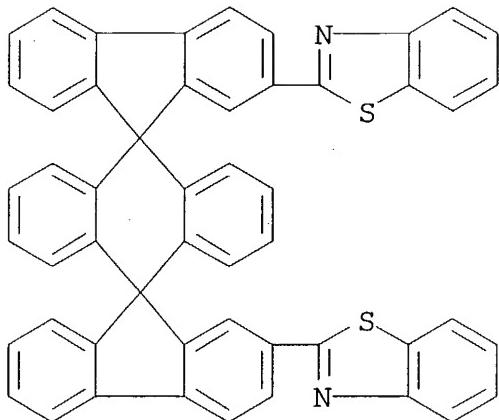
RN 474688-45-4 ZCPLUS

CN 1H-Benzimidazole, 2,2',2'',2'''-dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluorene]-2,2'',7,7'''-tetrayltetrakis[1-phenyl-(9CI) (CA INDEX NAME)]



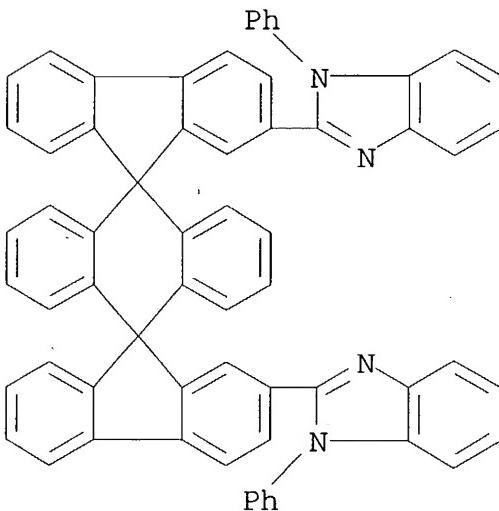
RN 474688-46-5 ZCPLUS

CN Benzothiazole, 2,2'-dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluorene]-2,2''-diylbis-(9CI) (CA INDEX NAME)



RN 474688-47-6 ZCPLUS

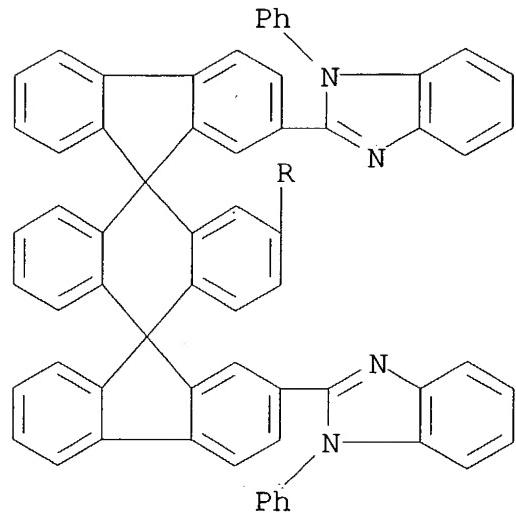
CN 1H-Benzimidazole, 2,2'-dispiro[9H-fluorene-9,9' (10'H)-anthracene-10',9''-[9H]fluorene]-2,2''-diylbis[1-phenyl- (9CI) (CA INDEX NAME)



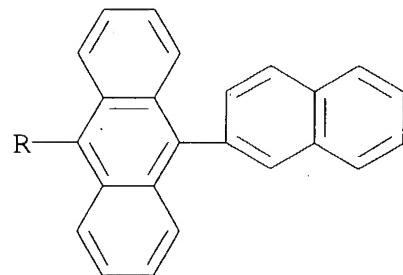
RN 474688-48-7 ZCPLUS

CN 1H-Benzimidazole, 2,2'-[2'-(10-(2-naphthalenyl)-9-anthracyenyl)dispiro[9H-fluorene-9,9' (10'H)-anthracene-10',9''-[9H]fluorene]-2,2''-diyl]bis[1-phenyl- (9CI) (CA INDEX NAME)

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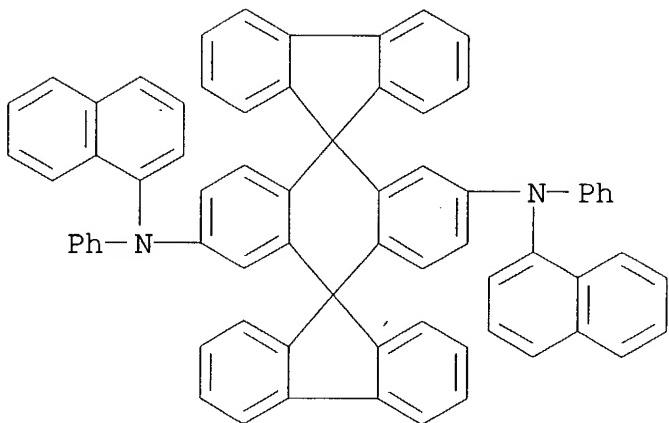


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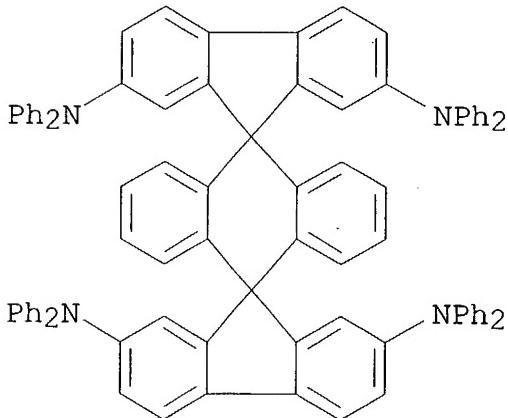


RN 474688-50-1 ZCPLUS

CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluorene]-
2',6'-diamine, N,N'-di-1-naphthalenyl-N,N'-diphenyl- (9CI) (CA
INDEX NAME)

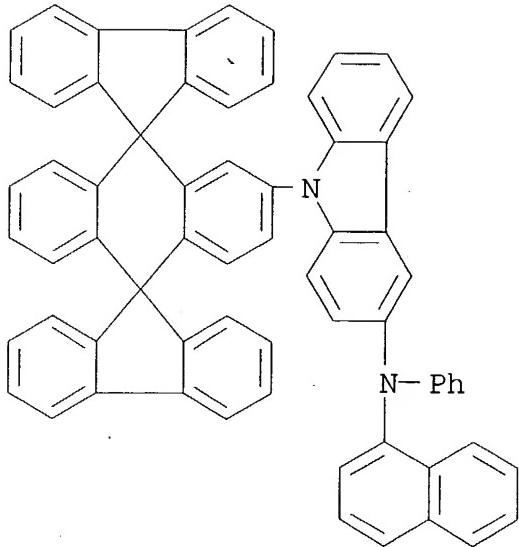


RN 474688-52-3 ZCPLUS

CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9'''-[9H]fluorene]-
2,2'',7',7'''-tetramine, N,N,N',N'',N''',N''',N''''-octaphenyl-
(9CI) (CA INDEX NAME)

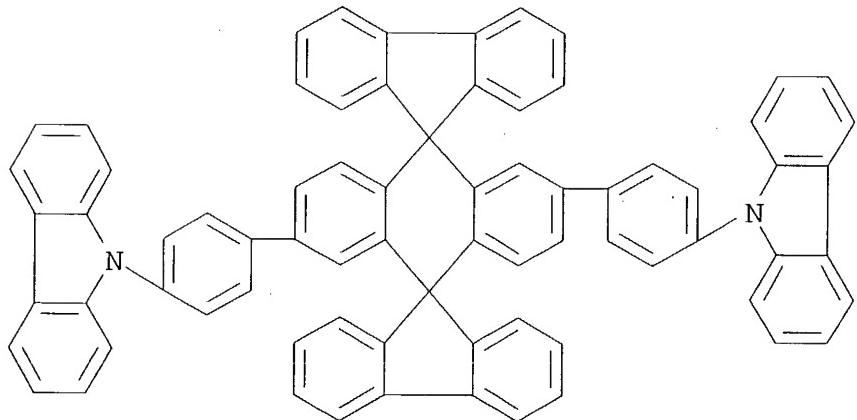
RN 474688-54-5 ZCPLUS

CN 9H-Carbazol-3-amine, 9-dispiro[9H-fluorene-9,9'(10'H)-anthracene-
10',9'''-[9H]fluoren]-2'-yl-N-1-naphthalenyl-N-phenyl- (9CI) (CA
INDEX NAME)



RN 474688-59-0 ZCPLUS

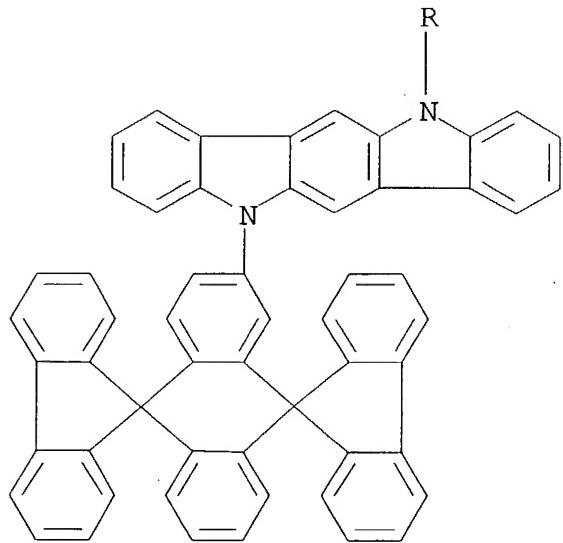
CN 9H-Carbazole, 9,9'-(dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluorene]-2',6'-diyl)di-4,1-phenylenebis- (9CI) (CA INDEX NAME)



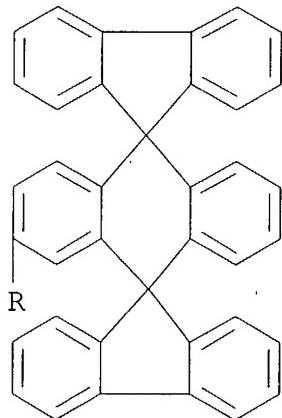
RN 474688-61-4 ZCPLUS

CN Indolo[3,2-b]carbazole, 5,11-bis(dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluoren]-2'-yl)-5,11-dihydro- (9CI) (CA INDEX NAME)

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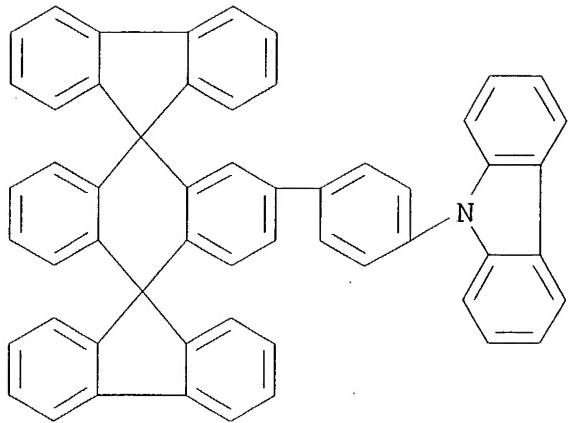


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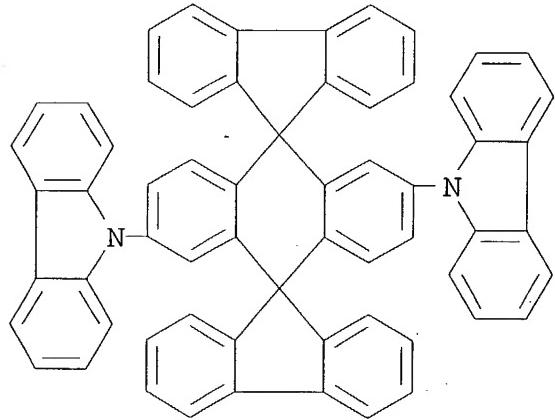
RN 474688-62-5 ZCPLUS

CN 9H-Carbazole, 9-(4-dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9'''- [9H]fluoren]-2'-ylphenyl)- (9CI) (CA INDEX NAME)



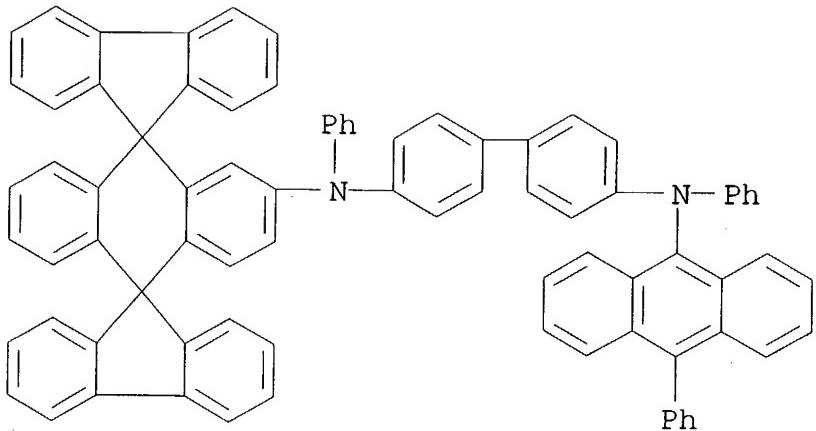
RN 474688-63-6 ZCPLUS

CN 9H-Carbazole, 9,9'-dispiro[9H-fluorene-9,9' (10'H)-anthracene-10',9''-[9H]fluorene]-2',6'-diylbis- (9CI) (CA INDEX NAME)



RN 474688-64-7 ZCPLUS

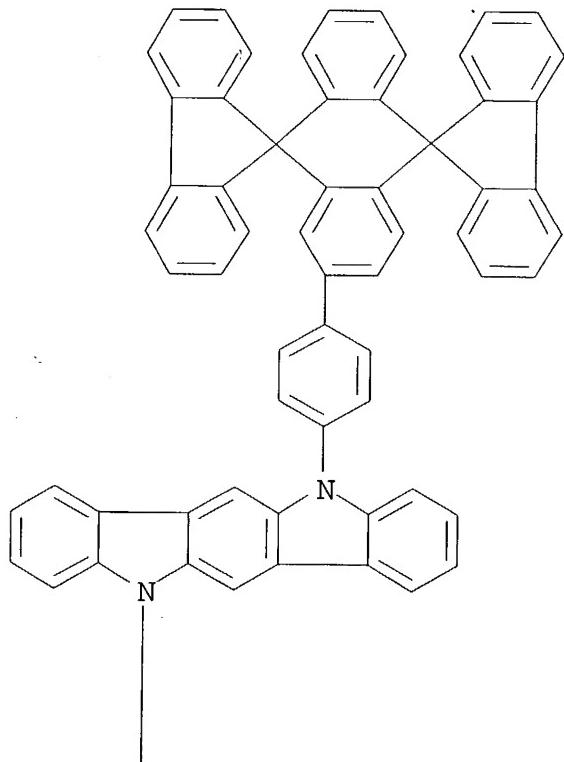
CN [1,1'-Biphenyl]-4,4'-diamine, N-dispiro[9H-fluorene-9,9' (10'H)-anthracene-10',9''-[9H]fluoren]-2'-yl-N,N'-diphenyl-N'-(10-phenyl-9-anthracenyl)- (9CI) (CA INDEX NAME)



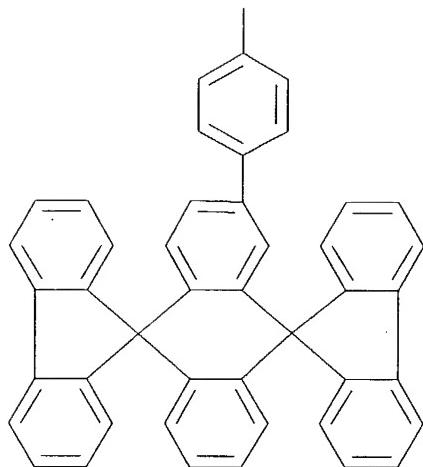
RN 474688-65-8 ZCPLUS

CN Indolo[3,2-b]carbazole, 5,11-bis(4-dispiro[9H-fluorene-9,9'-(10'H)-anthracene-10',9''-[9H]fluoren]-2'-ylphenyl)-5,11-dihydro- (9CI)
(CA INDEX NAME)

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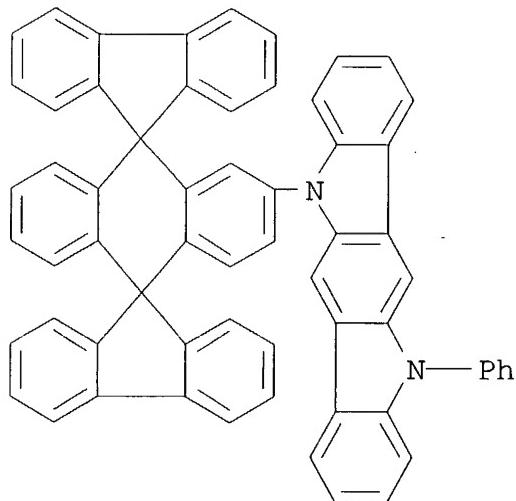


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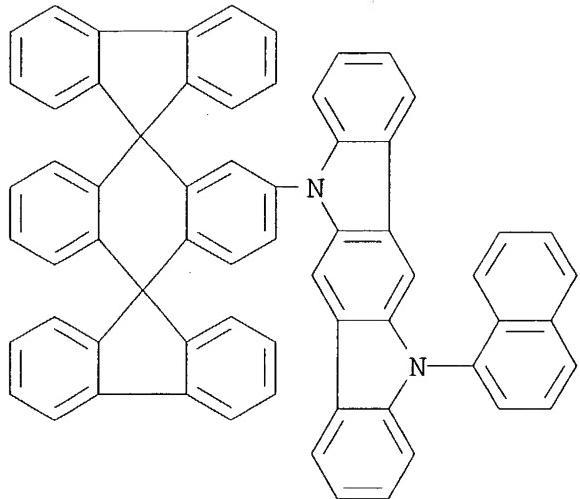
RN 474688-66-9 ZCPLUS

CN Indolo[3,2-b]carbazole, 5-dispiro[9H-fluorene-9,9'-(10'H)-anthracene-10',9'''-[9H]fluoren]-2'-yl-5,11-dihydro-11-phenyl- (9CI) (CA INDEX NAME)



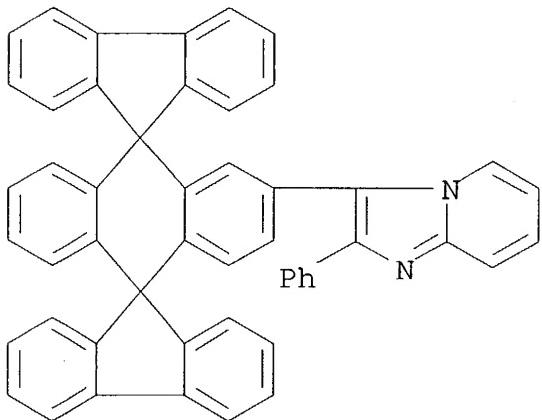
RN 474688-67-0 ZCPLUS

CN Indolo[3,2-b]carbazole, 5-dispiro[9H-fluorene-9,9'-(10'H)-anthracene-10',9'''-[9H]fluoren]-2'-yl-5,11-dihydro-11-(1-naphthalenyl)- (9CI) (CA INDEX NAME)



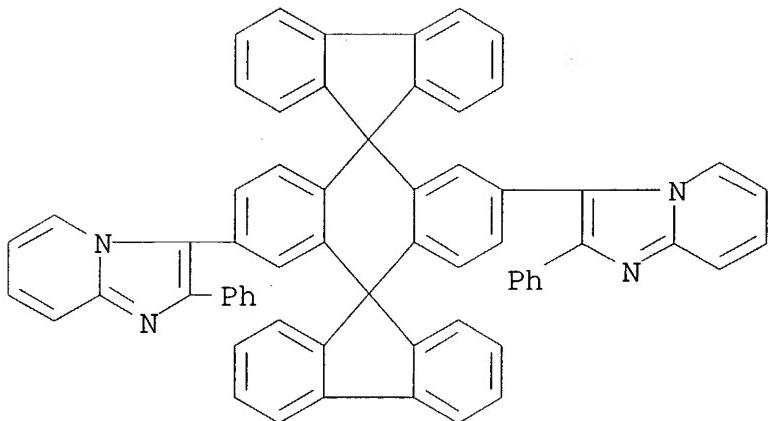
RN 474688-68-1 ZCPLUS

CN Imidazo[1,2-a]pyridine, 3-dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluoren]-2'-yl-2-phenyl- (9CI) (CA INDEX NAME)



RN 474688-69-2 ZCPLUS

CN Imidazo[1,2-a]pyridine, 3,3'-dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluorene]-2',6'-diylbis[2-phenyl- (9CI) (CA INDEX NAME)

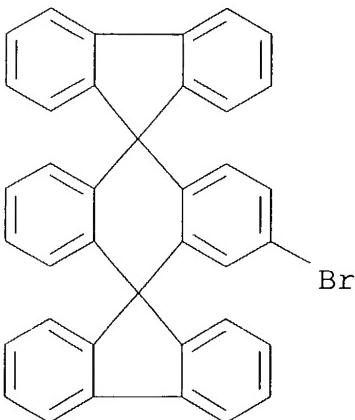


IT 474687-62-2P 474687-68-8P 474687-70-2P
 474687-74-6P 474687-77-9P 474687-79-1P
 474687-82-6P 474687-85-9P 474687-87-1P
 474687-88-2P

(double-spiro org. compds. and electroluminescent devices using them)

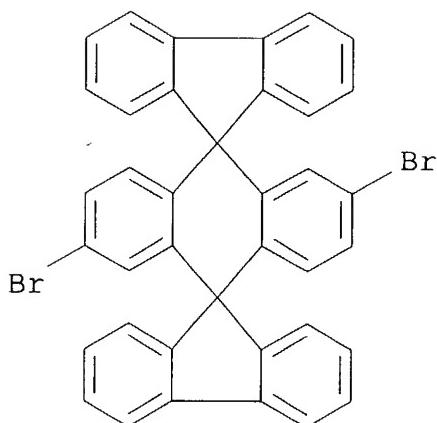
RN 474687-62-2 ZCPLUS

CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluorene],
 2'-bromo- (9CI) (CA INDEX NAME)



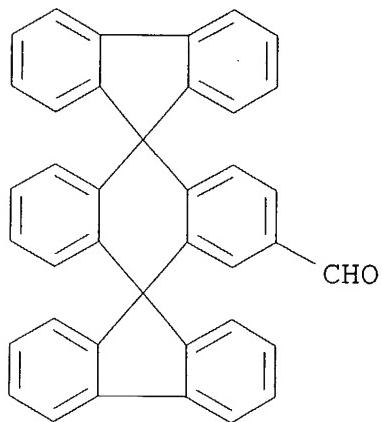
RN 474687-68-8 ZCPLUS

CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluorene],
 2',6'-dibromo- (9CI) (CA INDEX NAME)



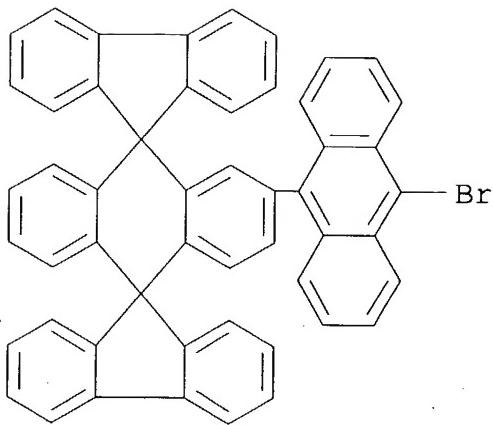
RN 474687-70-2 ZCPLUS

CN Dispiro[9H-fluorene-9,9'-(10'H)-anthracene-10',9''-[9H]fluorene]-2'-carboxaldehyde (9CI) (CA INDEX NAME)



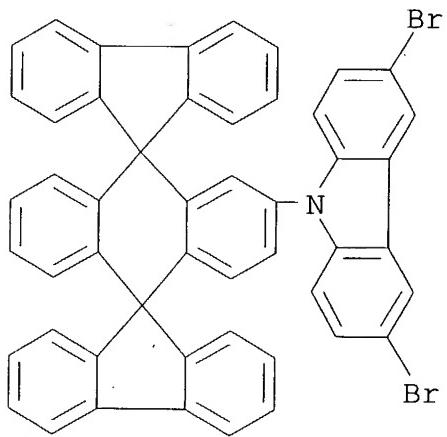
RN 474687-74-6 ZCPLUS

CN Dispiro[9H-fluorene-9,9'-(10'H)-anthracene-10',9''-[9H]fluorene],2'-(10-bromo-9-anthracyl)- (9CI) (CA INDEX NAME)



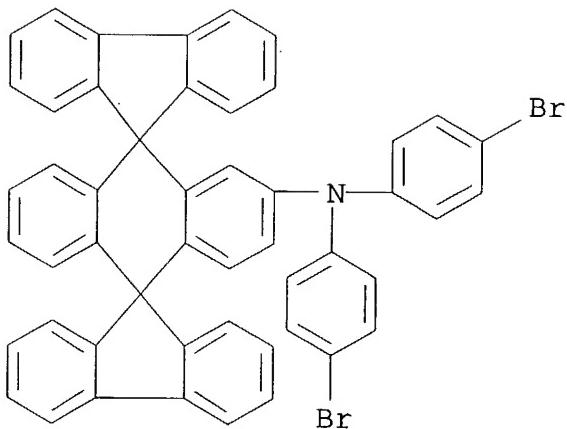
RN 474687-77-9 ZCPLUS

CN 9H-Carbazole, 3,6-dibromo-9-dispiro[9H-fluorene-9,9'-(10'H)-anthracene-10',9''-[9H]fluoren]-2'-yl- (9CI) (CA INDEX NAME)



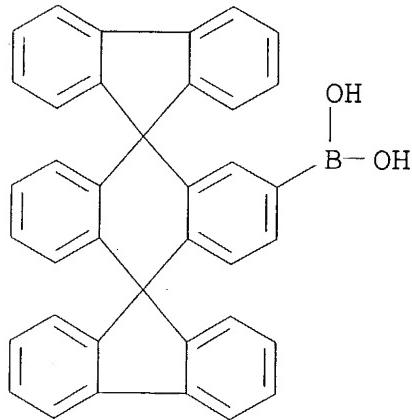
RN 474687-79-1 ZCPLUS

CN Dispiro[9H-fluorene-9,9'-(10'H)-anthracene-10',9''-[9H]fluoren]-2'-amine, N,N-bis(4-bromophenyl)- (9CI) (CA INDEX NAME)



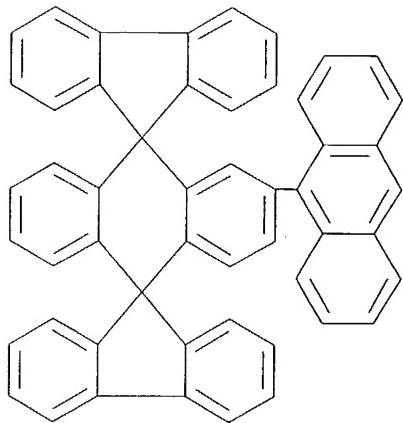
RN 474687-82-6 ZCPLUS

CN Boronic acid, dispiro[9H-fluorene-9,9' (10'H)-anthracene-10',9'''- [9H]fluoren]-2'-yl- (9CI) (CA INDEX NAME)



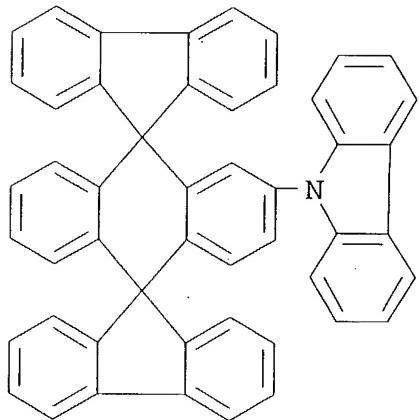
RN 474687-85-9 ZCPLUS

CN Dispiro[9H-fluorene-9,9' (10'H)-anthracene-10',9'''- [9H]fluoren], 2'-(9-anthracyl)- (9CI) (CA INDEX NAME)



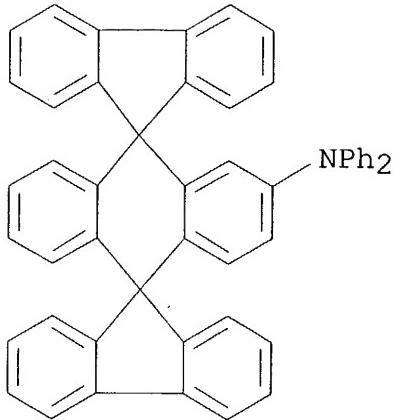
RN 474687-87-1 ZCPLUS

CN 9H-Carbazole, 9-dispiro[9H-fluorene-9,9' (10'H)-anthracene-10',9'''- [9H]fluoren]-2'-yl- (9CI) (CA INDEX NAME)



RN 474687-88-2 ZCPLUS

CN Dispiro[9H-fluorene-9,9' (10'H)-anthracene-10',9'''- [9H]fluoren]-2'-amine, N,N-diphenyl- (9CI) (CA INDEX NAME)

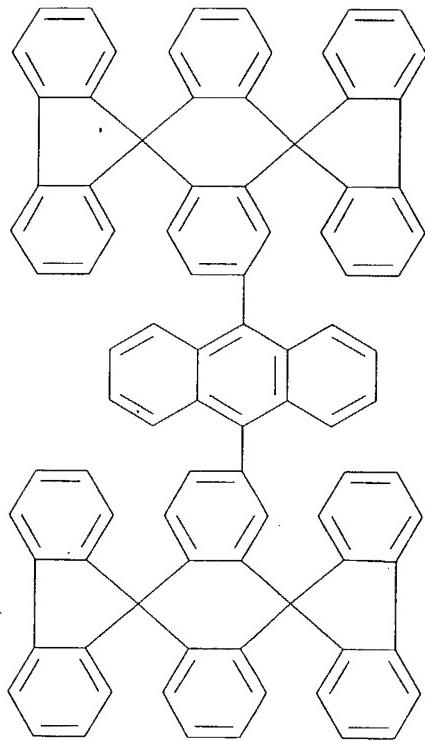


IT 474687-91-7P 474687-92-8P 474687-94-0P
474687-96-2P 474687-98-4P 474687-99-5P
474688-00-1P 474688-02-3P 474688-03-4P
474688-05-6P 474688-06-7P 474688-07-8P
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474688-60-3P

(double-spiro org. compds. and electroluminescent devices using them)

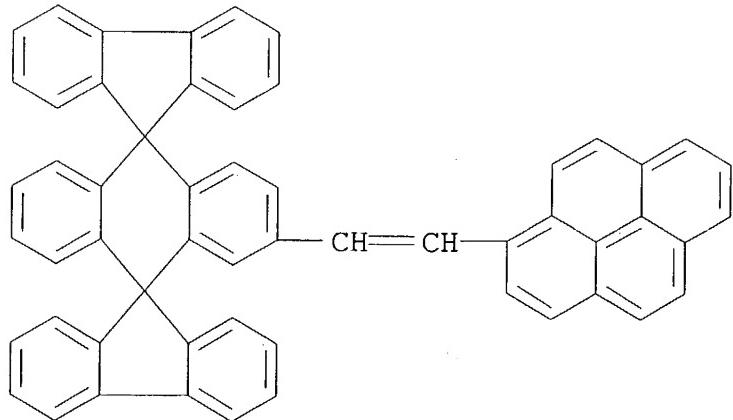
RN 474687-91-7 ZCAPLUS

CN Dispiro[9H-fluorene-9,9' (10'H)-anthracene-10',9'''-[9H]fluorene],
2',2''''-(9,10-anthracenediyl)bis- (9CI) (CA INDEX NAME)



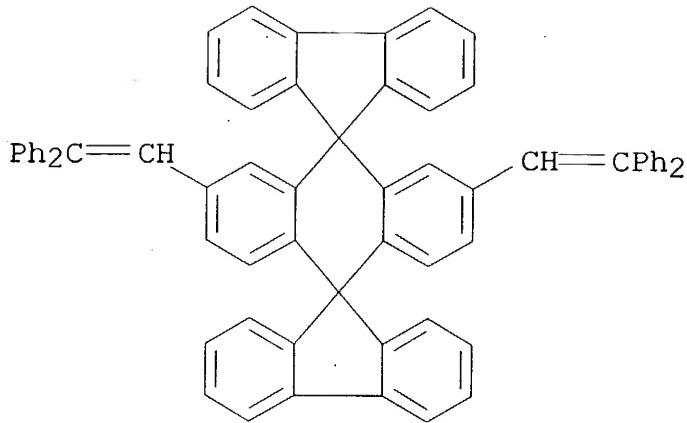
RN 474687-92-8 ZCPLUS

CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluorene],
2'-[2-(1-pyrenyl)ethenyl]- (9CI) (CA INDEX NAME)



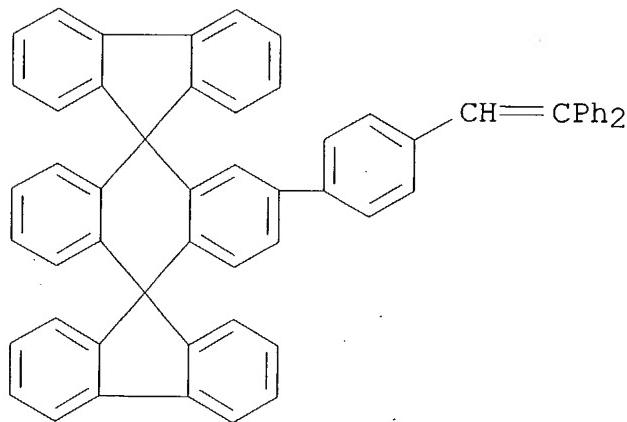
RN 474687-94-0 ZCPLUS

CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluorene],
2',7'-bis(2,2-diphenylethenyl)- (9CI) (CA INDEX NAME)



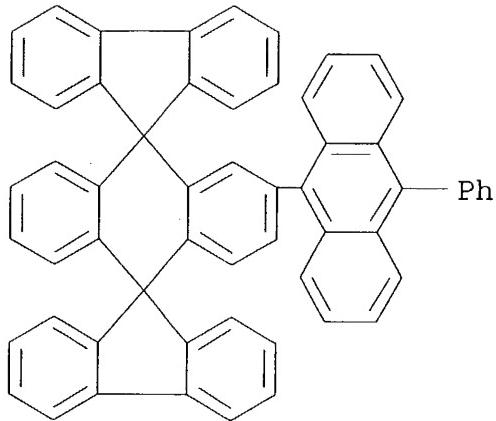
RN 474687-96-2 ZCPLUS

CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluorene],
2'-(4-(2,2-diphenylethenyl)phenyl]- (9CI) (CA INDEX NAME)



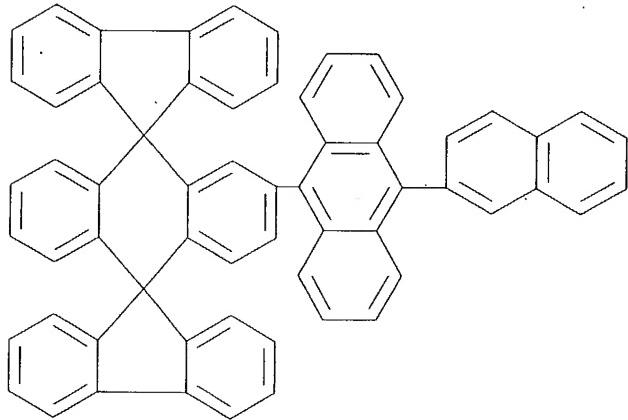
RN 474687-98-4 ZCPLUS

CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluorene],
2'-(10-phenyl-9-anthracyenyl)- (9CI) (CA INDEX NAME)



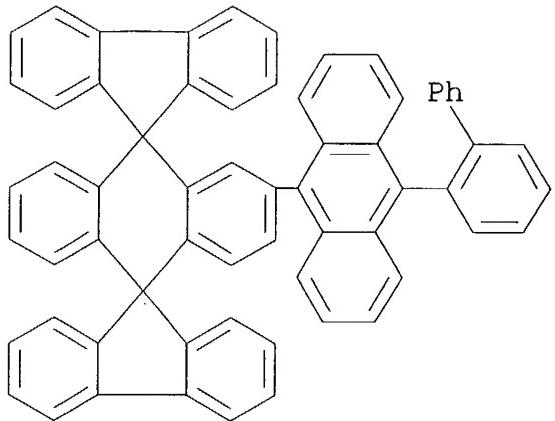
RN 474687-99-5 ZCPLUS

CN Dispiro[9H-fluorene-9,9'-(10'H)-anthracene-10',9'''-[9H]fluorene],
2'-(10-(2-naphthalenyl)-9-anthracyl)- (9CI) (CA INDEX NAME)



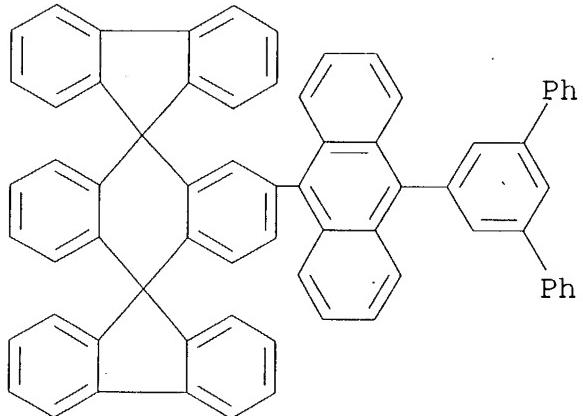
RN 474688-00-1 ZCPLUS

CN Dispiro[9H-fluorene-9,9'-(10'H)-anthracene-10',9'''-[9H]fluorene],
2'-(10-[1,1'-biphenyl]-2-yl-9-anthracyl)- (9CI) (CA INDEX NAME)



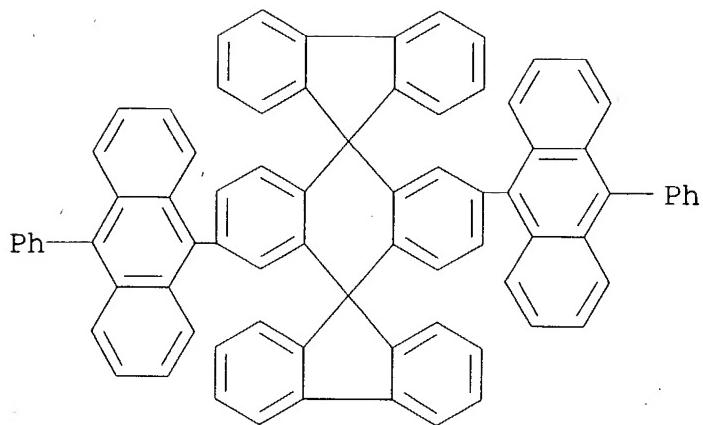
RN 474688-02-3 ZCPLUS

CN Dispiro[9H-fluorene-9,9'-(10'H)-anthracene-10',9'''-[9H]fluorene],
2''-(10-[1,1':3',1'''-terphenyl]-5'-yl-9-anthracyl]- (9CI) (CA
INDEX NAME)



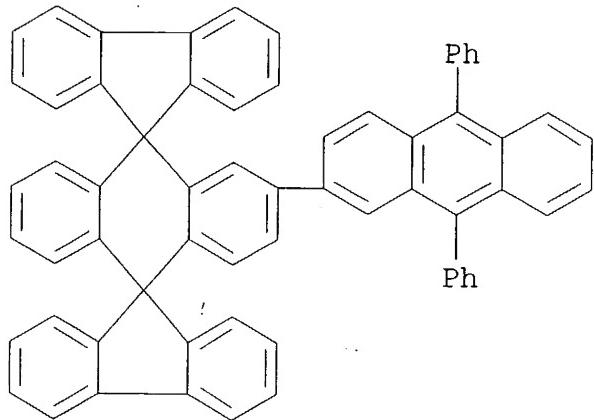
RN 474688-03-4 ZCPLUS

CN Dispiro[9H-fluorene-9,9'-(10'H)-anthracene-10',9'''-[9H]fluorene],
2',6'-bis(10-phenyl-9-anthracyl]- (9CI) (CA INDEX NAME)



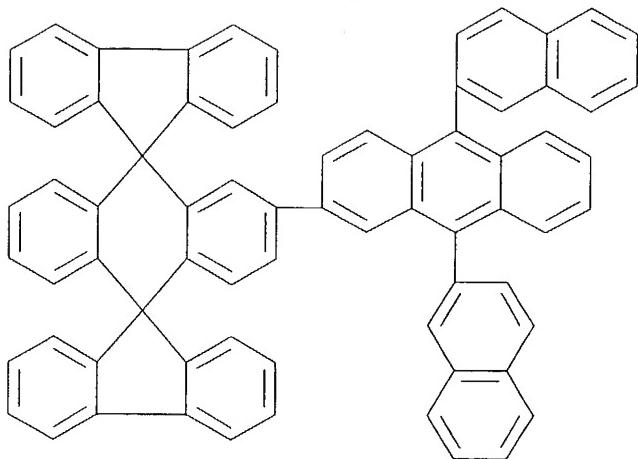
RN 474688-05-6 ZCPLUS

CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9'''-[9H]fluorene],
2'-(9,10-diphenyl-2-anthracyl)- (9CI) (CA INDEX NAME)



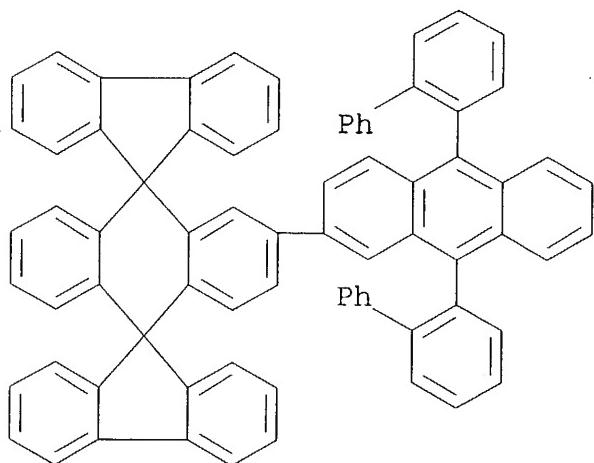
RN 474688-06-7 ZCPLUS

CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9'''-[9H]fluorene],
2'-(9,10-di-2-naphthalenyl-2-anthracyl)- (9CI) (CA INDEX NAME)



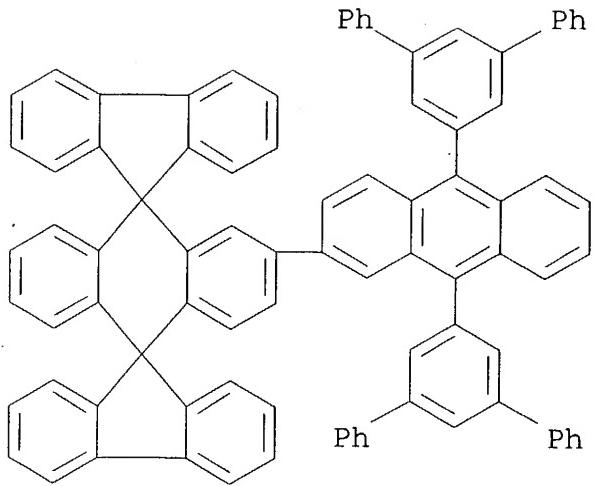
RN 474688-07-8 ZCPLUS

CN Dispiro[9H-fluorene-9,9'-(10'H)-anthracene-10',9''-[9H]fluorene],
2'-[9,10-bis([1,1'-biphenyl]-2-yl)-2-anthracyenyl]- (9CI) (CA INDEX
NAME)



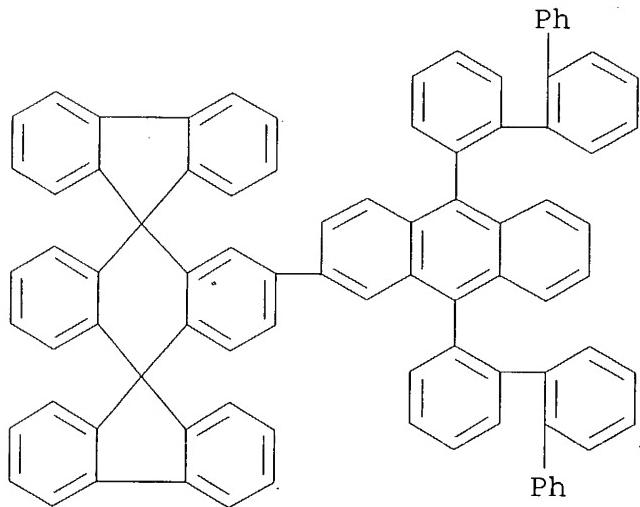
RN 474688-08-9 ZCPLUS

CN Dispiro[9H-fluorene-9,9'-(10'H)-anthracene-10',9''-[9H]fluorene],
2'-[9,10-bis([1,1':3',1'''-terphenyl]-5'-yl)-2-anthracyenyl]- (9CI)
(CA INDEX NAME)



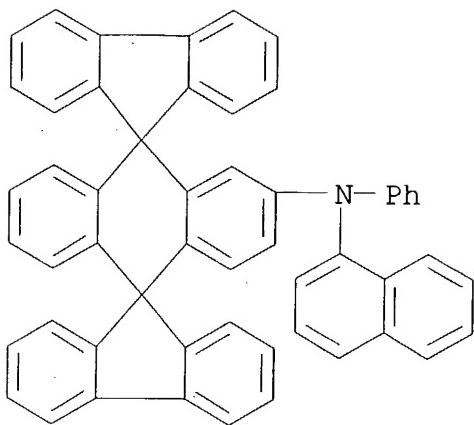
RN 474688-24-9 ZCPLUS

CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9'''-[9H]fluorene],
2'-[9,10-bis([1,1':2',1'''-terphenyl]-2-yl)-2-anthracenyl]- (9CI)
(CA INDEX NAME)



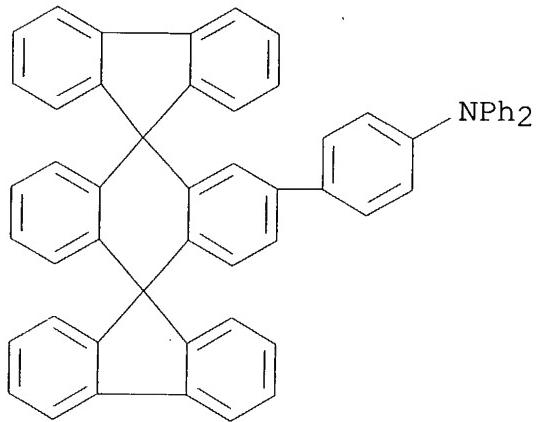
RN 474688-49-8 ZCPLUS

CN Dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9'''-[9H]fluoren]-2'-
amine, N-1-naphthalenyl-N-phenyl- (9CI) (CA INDEX NAME)



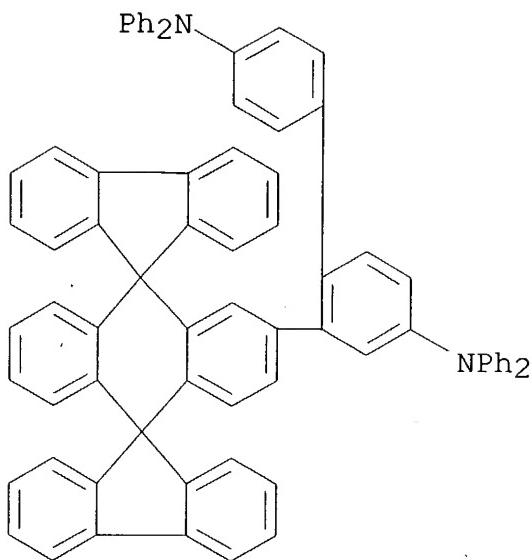
RN 474688-51-2 ZCPLUS

CN Benzenamine, 4-dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluoren]-2'-yl-N,N-diphenyl- (9CI) (CA INDEX NAME)



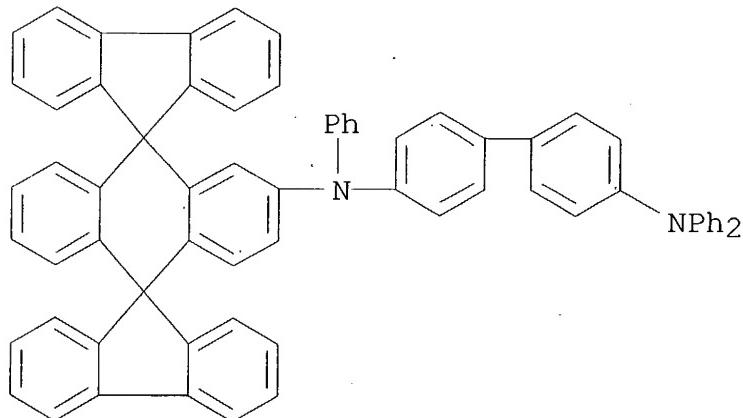
RN 474688-53-4 ZCPLUS

CN [1,1'-Biphenyl]-4,4'-diamine, 2-dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluoren]-2'-yl-N,N,N',N'-tetraphenyl- (9CI) (CA INDEX NAME)



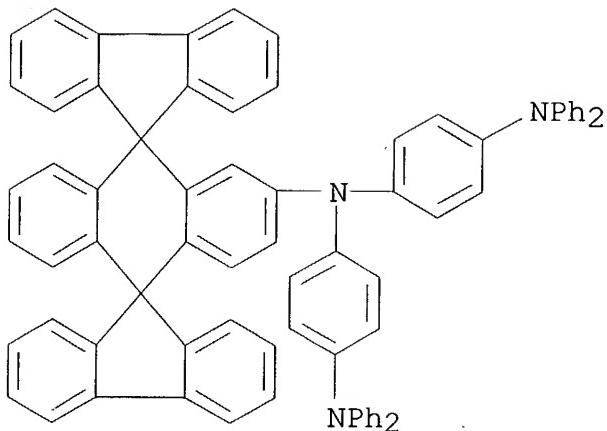
RN 474688-55-6 ZCPLUS

CN [1,1'-Biphenyl]-4,4'-diamine, N-dispiro[9H-fluorene-9,9'-(10'H)-anthracene-10',9''-[9H]fluoren]-2'-yl-N,N',N'-triphenyl- (9CI) (CA INDEX NAME)



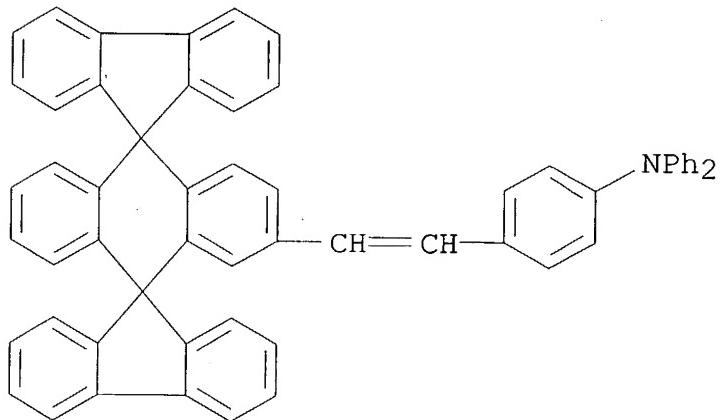
RN 474688-56-7 ZCPLUS

CN 1,4-Benzenediamine, N-[4-(diphenylamino)phenyl]-N-dispiro[9H-fluorene-9,9'-(10'H)-anthracene-10',9''-[9H]fluoren]-2'-yl-N',N'-diphenyl- (9CI) (CA INDEX NAME)



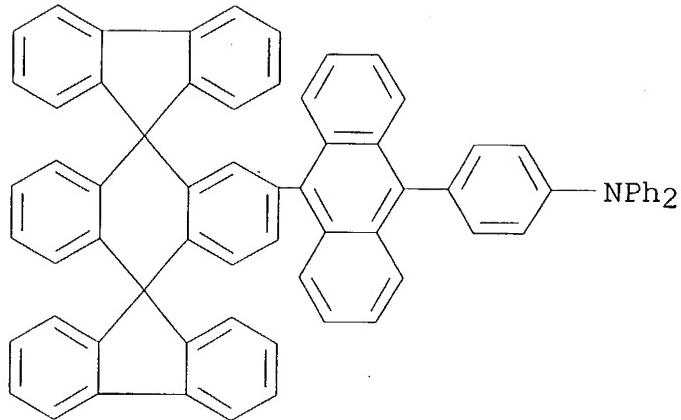
RN 474688-57-8 ZCPLUS

CN Benzenamine, 4-(2-dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluoren]-2'-ylethenyl)-N,N-diphenyl- (9CI) (CA INDEX NAME)



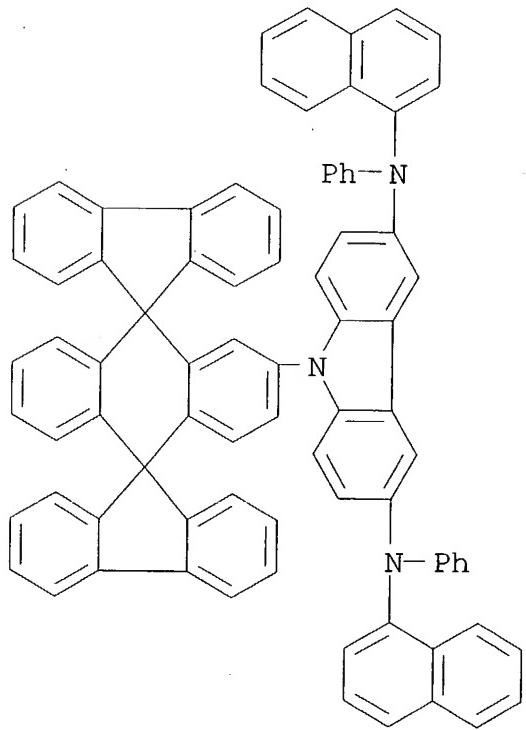
RN 474688-58-9 ZCPLUS

CN Benzenamine, 4-(10-dispiro[9H-fluorene-9,9'(10'H)-anthracene-10',9''-[9H]fluoren]-2'-yl-9-anthracyl)-N,N-diphenyl- (9CI) (CA INDEX NAME)



RN 474688-60-3 ZCPLUS

CN 9H-Carbazole-3,6-diamine, 9-dispiro[9H-fluorene-9,9' (10'H)-anthracene-10',9''-[9H]fluoren]-2'-yl-N,N'-di-1-naphthalenyl-N,N'-diphenyl- (9CI) (CA INDEX NAME)



IT 474687-62-2D, derivs. 474687-68-8D, derivs.
474687-72-4 474687-74-6D, derivs.

474687-77-9D, derivs. 474687-79-1D, derivs.
474687-89-3 474687-90-6 474687-93-9
474687-95-1 474687-97-3 474688-01-2
474688-04-5 474688-09-0 474688-10-3
474688-11-4 474688-12-5 474688-13-6
474688-14-7 474688-15-8 474688-16-9
474688-17-0 474688-18-1 474688-19-2
474688-20-5 474688-21-6 474688-22-7
474688-23-8 474688-25-0 474688-26-1
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474688-62-5 474688-63-6 474688-64-7
474688-65-8 474688-66-9 474688-67-0
474688-68-1 474688-69-2

(double-spiro org. compds. and electroluminescent devices using them)

IT 474687-62-2P 474687-68-8P 474687-70-2P
474687-74-6P 474687-77-9P 474687-79-1P
474687-82-6P 474687-85-9P 474687-87-1P
474687-88-2P

(double-spiro org. compds. and electroluminescent devices using them)

IT 474687-91-7P 474687-92-8P 474687-94-0P
474687-96-2P 474687-98-4P 474687-99-5P
474688-00-1P 474688-02-3P 474688-03-4P
474688-05-6P 474688-06-7P 474688-07-8P
474688-08-9P 474688-24-9P 474688-49-8P
474688-51-2P 474688-53-4P 474688-55-6P
474688-56-7P 474688-57-8P 474688-58-9P
474688-60-3P

(double-spiro org. compds. and electroluminescent devices using them)

REFERENCE COUNT:

3

THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT